

Department of Planning and Community Development Documents Library – Document Cover Sheet

Title of Document: A New Look for 21st Street and Colley Avenue

Prepared By: James Urban

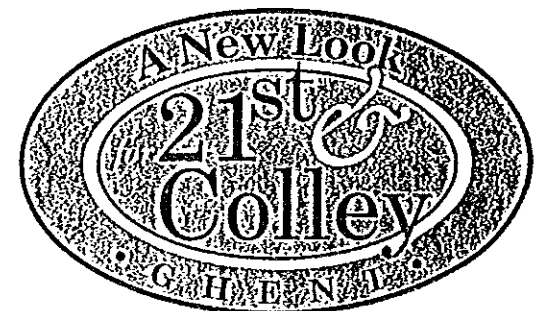
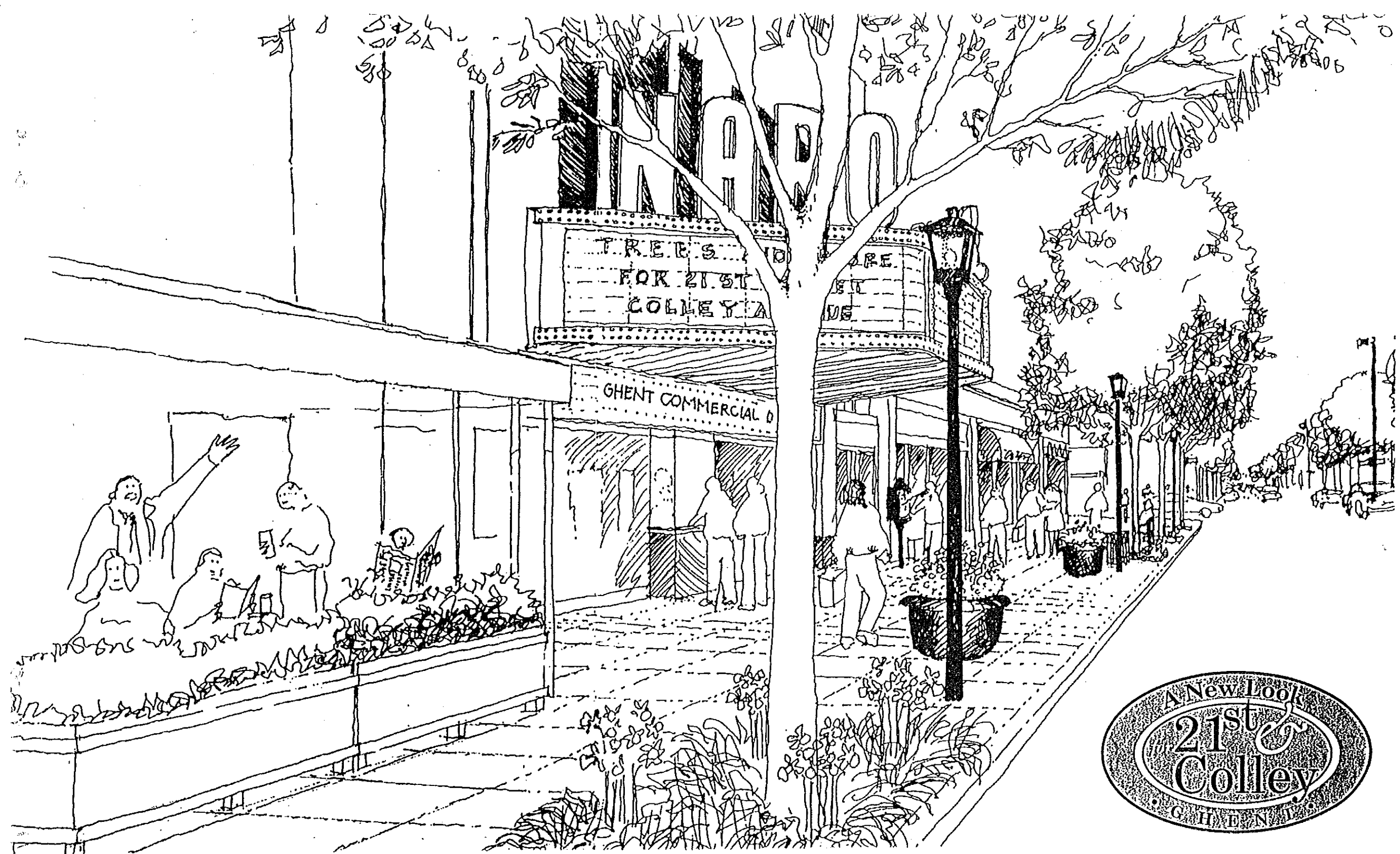
Prepared For: City of Norfolk, Ghent Task Force, Ghent Business Association

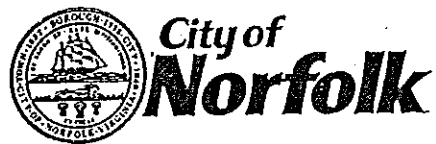
Date of Preparation: March 1995

Status (as of January 2012): No action taken by City Council to adopt this plan. Some plan actions reaffirmed by City Council in 2009.

Civic League(s)/Organization(s) Affected: Ghent Neighborhood League, Ghent Business Association

The information included in this document may not reflect current City of Norfolk policy. For more information on this document, contact the City of Norfolk Department of Planning and Community Development.

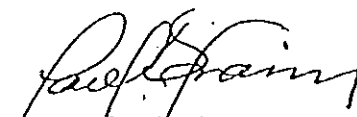




Dear Friends:

Ghent is one of Norfolk's show places. Its commercial district, centered along 21st Street and Colley Avenue, is a critical component of the larger community's attraction and quality of life. We believe that the streetscape program highlighted in this report, to be constructed in phases, will support the vitality of the commercial district and contribute to the neighborhood's overall quality. This is just one of the steps we are taking for community improvement in Ghent and throughout your city.

Participate with us in achieving the vision.


Paul D. Fraim
Mayor

March 1995

A New Look For 21st Street and Colley Avenue is being undertaken by:

The City of Norfolk, Virginia

Norfolk City Council
Norfolk City Planning Commission
Norfolk Design Review Committee
Norfolk City Administration and Departments
City Manager's Office
City Planning and Codes Administration
Development
Parks and Recreation
Public Works
Utilities

Ghent Task Force

Ghent Business Association

Prepared by:
James R. Urban, ASLA
Annapolis, Maryland
Norfolk Landscape Architectural Design Advisor

The commercial district streetscape design presented in this report has the support of the Ghent Task Force, the Ghent Business Association and individual property owners and merchants in the study area/ project corridor. It has been reviewed with the Design Review Committee and the City Planning Commission at several points and has been approved in concept by those two groups.

The next step is to confirm preliminary cost estimates for the various project elements and geographic segments, including the varying options governing the extent of undergrounding of overhead wiring throughout the project corridor. Policy decisions will then be able to be made as to the phasing, timing, and full extent of the project. These decisions will guide preparation of construction drawings and the implementation of the project.

The need for project construction staging and operations to be most sensitive to the ongoing business requirements of the abutting businesses is acknowledged to be a matter of utmost priority.

A New Look for 21st Street and Colley Avenue

Norfolk, Virginia

Table of Contents	Page		Page
Analysis		Design Principles	
I. Introduction	1	IV. Design Proposals	17
II. Project Area Definition	1	IV.A. Project Goals	17
III. General Description	1	IV.B. Streetscape Concepts	17
III.A. History	1	IV.C. Urban Design Issues	33
III.B. Land Use and Zones	5	IV.D. Typical Block Studies	33
III.C. Vehicular Circulation	7		
III.D. Parking	7		
III.E. Sidewalks and Paving	9		
III.F. Above Ground Utilities	11		
III.G. Lighting	11		
III.H. Planting	13		
III.I. Conclusion	14		

**A New Look for 21st Street and Colley
Avenue**

Analysis

I. Introduction

The Ghent commercial district along 21st Street and Colley Avenue capitalizes on and contributes to the vitality of the adjacent neighborhoods. Moreover, the special combination of retail stores, services, restaurants and entertainment venues brought about by private investment makes the district an important Norfolk asset which contributes to the citywide quality of life enjoyed by residents, visitors and tourists.

A coalition of Norfolk's leadership, working through the Ghent Task Force, has acknowledged the importance of this district to the economic well being of the city and has determined that a comprehensive improvement of the public streetscape along 21st Street and Colley Avenue is an important and timely step to position the district for additional private investment and continued economic growth.

This report presents in two sections the results of an intensive effort to develop a standard for the Ghent commercial district that responds to and enhances the development aspects that make Ghent a unique district in Norfolk. The first section is a comprehensive analysis of all elements comprising existing streetscape conditions in the core of the commercial district. The second section presents the streetscape standards for each element that has been approved to guide the development of construction documents for the actual work of upgrading the streetscape.

This project is another reflection of Norfolk's commitment to quality development in every section of the city. In the present instance, the commercial and residential neighborhoods of Ghent already reinforce each other. The streetscape standards for the Ghent commercial district presented in this report respond well to the

challenge to upgrade the existing conditions in the commercial district to enhance the commercial vitality of the district while providing attractive entrances to the residential neighborhoods lining the intersecting streets.

II. Project Area Definition

The study area is comprised of the primary retail and commercial districts in Ghent. It includes Colley Avenue from Westover Avenue to 22nd Street and 21st Street from its intersection with Core Avenue east to Monticello Avenue. However, there is nothing in the approved standards that would preclude their application outside the immediate study area. For example, a logical extension of the standard would be its application to the section of 21st Street that lies between Hampton Boulevard and Core Avenue.

This study concerns itself with the public sidewalks and open space areas bordered by the architecture on one side of the right-of-way and the street curb on the other. On the intersecting streets, the sidewalks bordering commercial properties are included.

During the course of the streetscape study, it became apparent that other key aspects of the commercial district, including assessment of the balance between parking supply and demand and the consideration of development standards to guide new construction, would benefit from joint review by the public and private sectors. That work is ongoing.

It should also be acknowledged that other commercial districts, in and adjacent to the Ghent neighborhood, while not included in this study, provide services to Ghent residents and are active members of the Ghent Business Association.

III. General Description

III. A . History

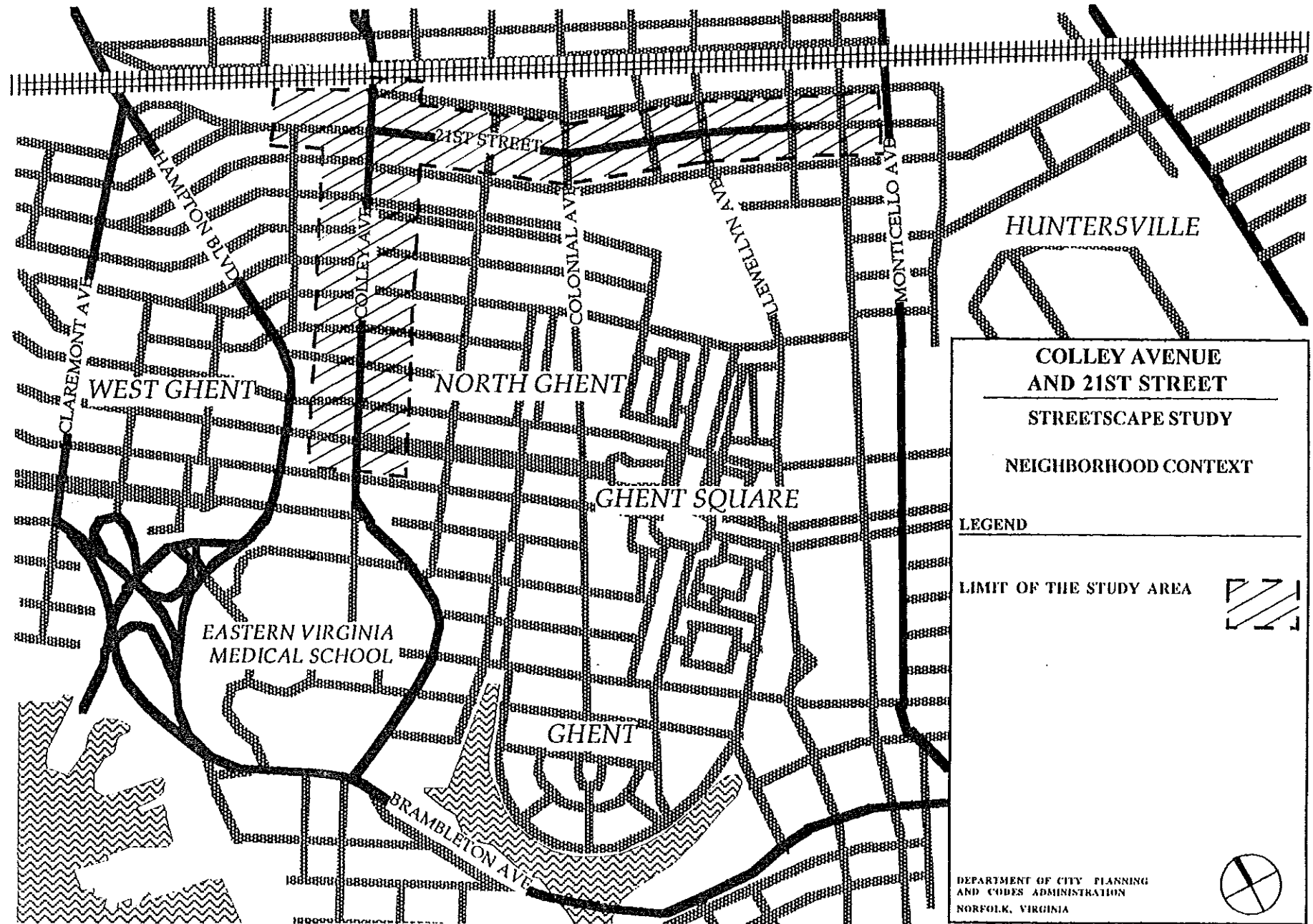
Adjacent to downtown Norfolk, Ghent is an historic community which was developed in the 1890's to provide additional housing within the developing city. It was the first planned residential community in Norfolk, and its design was derived from that of Ghent, Belgium. The geometric street pattern related directly to the quay formed by Smith Creek. Diverse housing, ranging from single family units to multi-unit apartments, was interspersed with open spaces and institutional facilities. As the need for urban housing intensified and the introduction of the automobile made adjacent areas more accessible, the original core community was expanded.

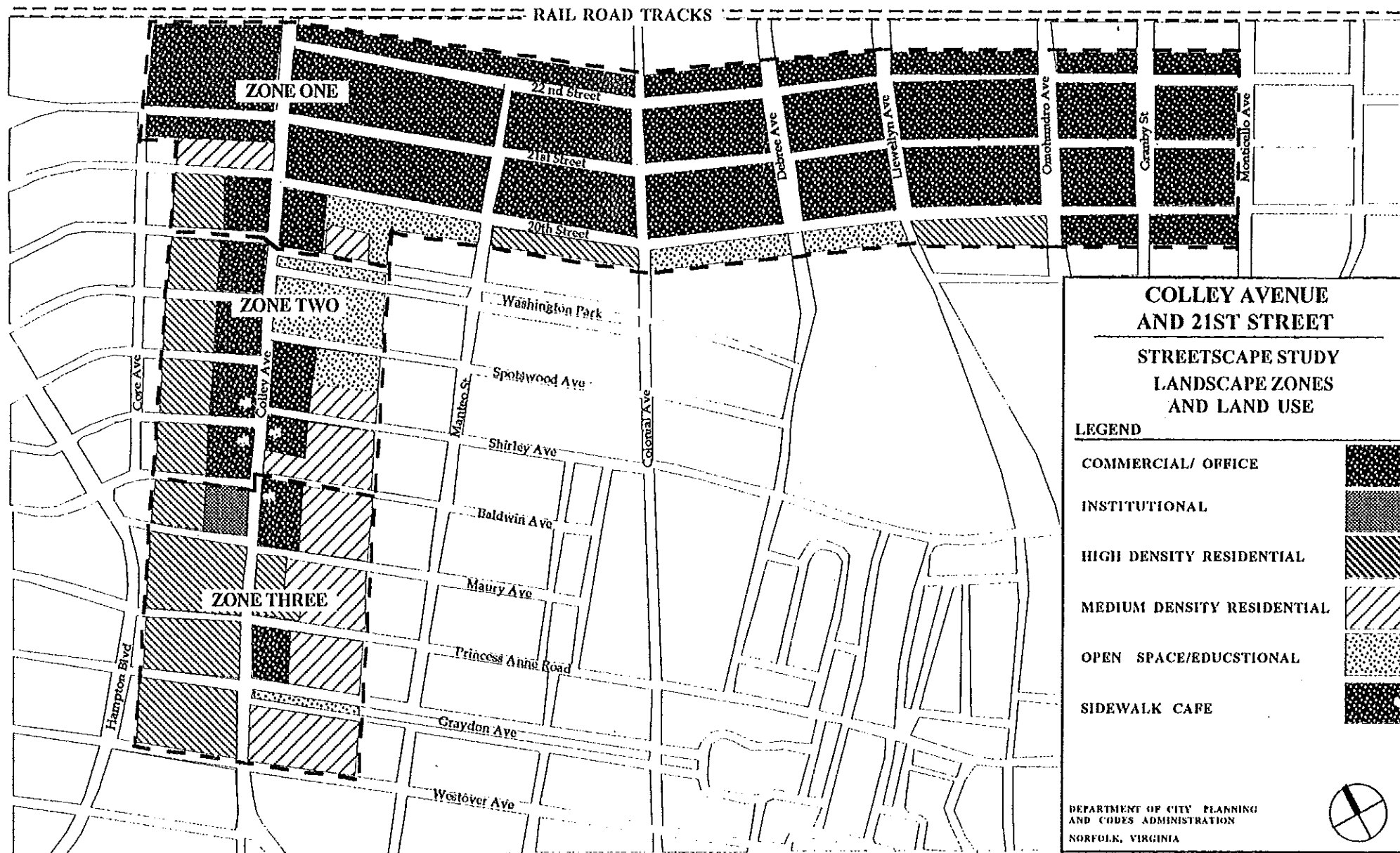
The configuration, scale and character of the greater Ghent neighborhoods were derived from the original development. North Ghent, an area of single family attached and detached houses, multi-unit apartments and condominiums was developed between 1890 and 1910, and from 1910 to 1935 residential development continued in West Ghent. In 1969 conservation-related activities were initiated in portions of Ghent and the redevelopment leading to Ghent Square was begun. Recognizing the need to immesh the new development into the fabric of the surrounding Ghent community, the developers aligned the new roads to the existing streets. The architecture and urban design reflected the design elements of the historic neighborhood.

The greater Ghent community, made up of four neighborhoods, is a significant residential resource for the City of Norfolk. The pedestrian scale of the architecture and the landscape, the efficient, interconnected roadways and the repetition of linear parkways connecting larger open spaces define the character of the area.

The commercial district in Ghent has evolved significantly over the periods when the city grew up around it and subsequently continued growing north and then east to the present City limits. As the population center of the city and the region moved east, services related to a larger automobile-oriented market moved out even while the commercial district kept its orientation to providing goods and services to the adjacent and nearby neighborhoods. Then, coinciding with the success of redevelopment and conservation activities and the growth of the Medical Center, the Ghent commercial district began to attract a variety of businesses with a larger regional appeal. Properties were either converted or new construction was undertaken.

Today the Ghent commercial district includes an eclectic mix of retail goods and services, restaurants and entertainment. The district is supported by an active Ghent Business Association which seeks to foster an improved business climate for present businesses while attracting additional compatible businesses to help ensure that the district's continuing evolution proceeds positively and its economic base is reinforced..





III. B. Land Use and Landscape Zones

Three separate zones have been identified in the project area. These zones have unique physical and visual characteristics. The differences between these zones are sufficiently important to the overall structure of the project area that the recommendations of this study will be organized within the confines of each area.

Zone One

This zone of commercial and office use includes the entire length of 21st Street as well as the portion of Colley Avenue north of Washington Park. Professional offices are interspersed among the retail shops. Much of the architecture is bland industrial to commercial renovation or brash franchise architecture. Architectural style ranges from late Victorian to Modern. Commercial use has been a strong design influence, and many original facades have been altered or replaced. Setbacks and the critical relationship between building entrance and streetscape differ from site to site. While most of the older structures open onto the sidewalk, many of the newer buildings are separated from the sidewalks by parking lots. Several strip shopping centers turn their sides to the main street. The landscape is dominated by parking lots and the need to accommodate the automobile.

The south side of 21st Street between Debre and Llewellyn Avenues was recently renovated. The traditional relationship between entrance and street was maintained, and the repetition of style, materials and details unified the building block. The influence of this effort can be found elsewhere along 21st Street and merits repetition.

Zone Two

Colley Avenue, between Washington Park and Baldwin Avenue, is a zone of mixed land uses. At the northern

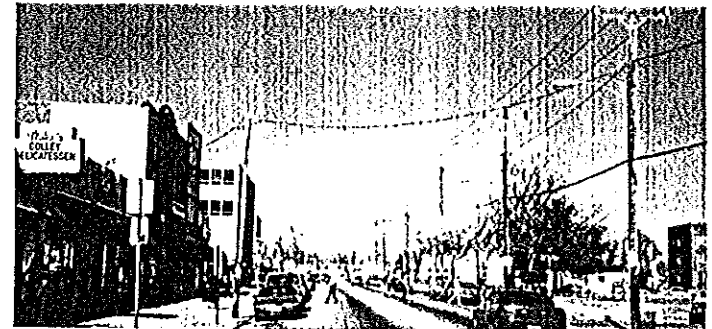
end, this zone is dominated by commercial uses. Washington Park and the campus of Blair Middle School interrupt the heavily commercial district. South of Spotswood Avenue businesses consist mainly of retail specialty shops, restaurants and a theater. Business hours in this area extend beyond normal commercial hours into the evening. Throughout this zone the architecture opens directly onto the sidewalk. Facadism has altered some of the original structures resulting in a variety of architectural styles, materials and scales. The facades of the older, traditional retail storefronts are interrupted by newer, metal and glass storefronts and a former gas station. Sidewalk cafes with awnings, tables and planters have extended the commercial uses into the public walkways.

Zone Three

Colley Avenue, south of Baldwin Avenue, is a residential area with scattered commercial and institutional uses. Multi-unit apartments and condominiums predominate. The brick and stone architecture of these large residential and institutional buildings is a mixture of traditional styles. While there are some single family homes on Colley Avenue, most front on the side streets. The commercial facilities, which include a laundry, gas station and beauty shop, serve the needs of the adjacent residential and institutional communities. Many of the commercial facilities are in residentially scaled buildings.



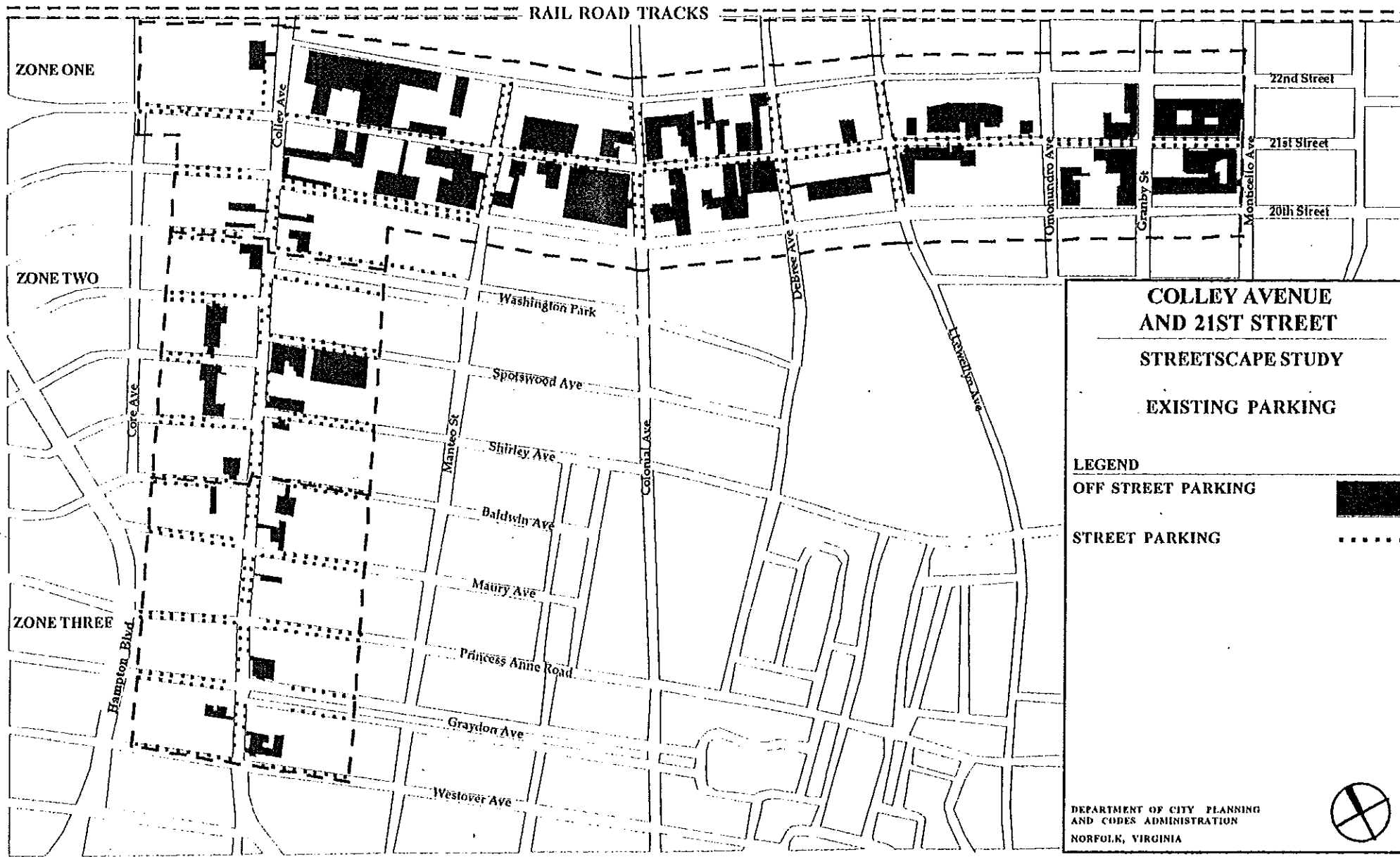
Zone One



Zone Two



Zone Three



III. C. Vehicular Circulation

21st Street and Colley Avenue are arterial routes which serve as important links to the surrounding city. In all three zones, Colley Avenue and 21st Street are generally 40 foot wide roadways consisting of two lanes of traffic and parking on both sides of the street. The road surface is asphalt. Crosswalks are painted in locations of heaviest pedestrian traffic. At the intersections of major thoroughfares, traffic lights control the flow of traffic and allow for pedestrian crossing.

Zone One

21st Street provides one of the few east to west vehicular links in this portion of the city. This use, combined with its retail and commercial function, make it a busy street at peak traffic times. The large number of driveways which access onto 21st Street result in an increase in turns onto the roadway. While traffic is generally lighter on 21st Street than on Colley Avenue, there is a marked increase in usage during daily rush hour and during heavy rainstorms when it serves as an alternate route if critical underpasses become flooded. 21st Street currently is used by city buses, and there are several stops in the study area.

Zones Two and Three

At the south end of Colley Avenue is the Norfolk Medical Center complex, a facility which serves the entire Tidewater region. Colley Avenue functions as a major approach to the center as well as a principal north/south citywide connector. Additionally Colley Avenue serves as the commercial and service center for the adjacent communities which compounds the traffic congestion on this street. Traffic volume is heavy on Colley Avenue, and the flow is constant throughout the day and evening.

In Zone Three in the block between Maury Avenue and Princess Anne Road the alignment makes a subtle shift to the west. The east curb is angled to make the transition but the west curb runs parallel with the alignment of the right of way north of Maury Avenue. This creates two problems. First, the road width varies along the block from 48' of road bed at the north end to 38' at the south. Second, the wider road bed is squeezed against the west property line, leaving a tree lawn that is too narrow to plant trees. The transition from a 48' wide road to a 40' wide road at the north end of this block is awkward. The narrow road width of 38' at the south end of the block is constrictive.

III. D. Parking

Zone One

Parking is permitted on both sides of 21st Street although it is restricted to one hour during weekdays. Side streets have unrestricted parking. Additional parking is provided in off-street parking lots which relate directly to adjacent shops and services. In many instances the parking is between the structure and the sidewalk. Parking in these private lots is limited to customers using the related business.

There is no on-street parking along Colley Avenue between 20th and 21st Streets as all lanes are needed to accommodate the heavier traffic flow at the intersection with 21st Street. Off-street parking lots separate building and sidewalk and numerous driveways cross the sidewalk throughout the entire zone. These driveways are a significant part of the visual clutter of the area, add to traffic congestion and reduce the number of on-street parking spaces.

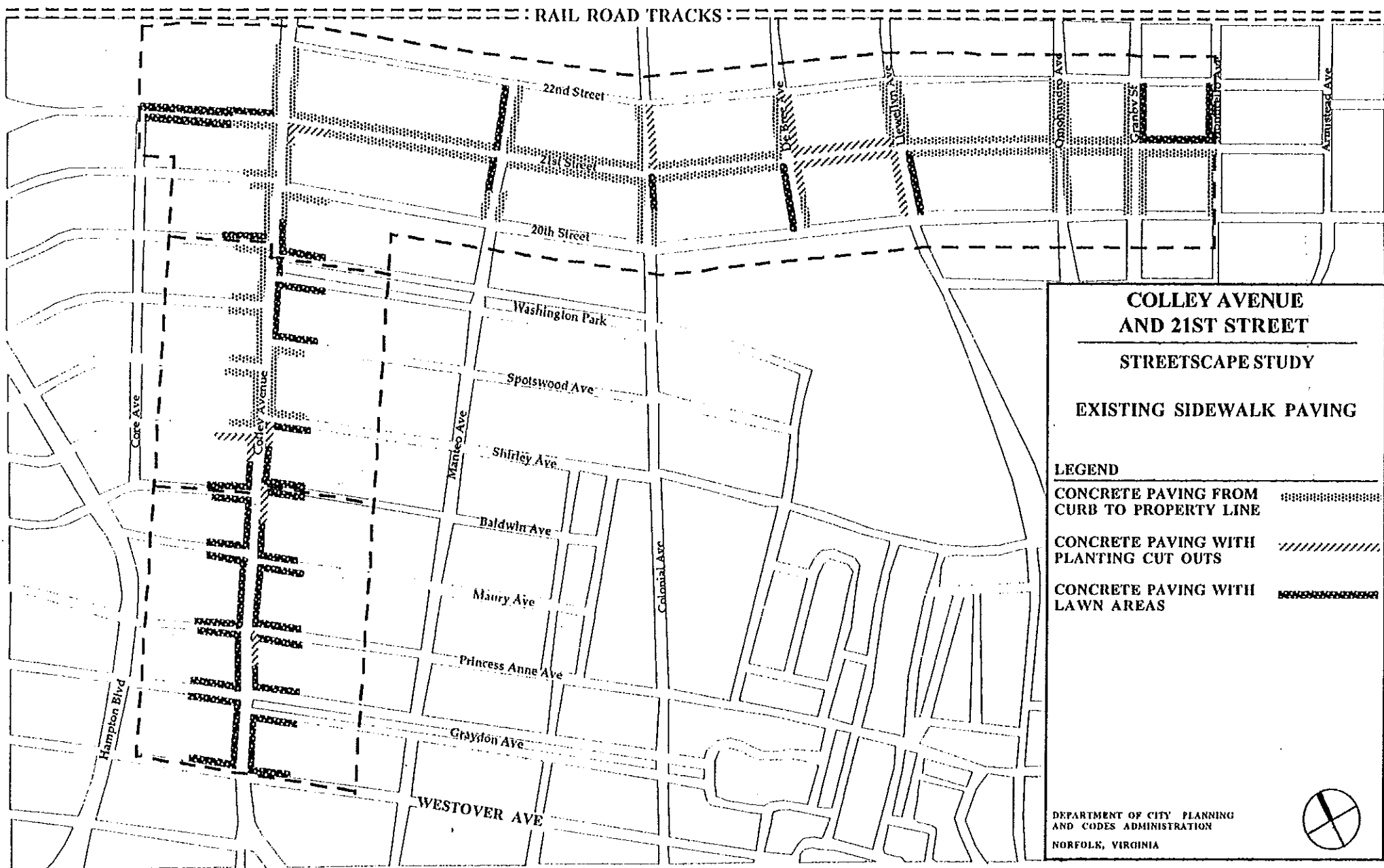
Zone Two

On-street parking in this zone is short term. Additional on-street parking is available on the side streets. Most of the off-street parking is located behind the buildings, but there are a few small lots on Colley Avenue which occur primarily on corner sites with access from both Colley Avenue and the adjoining side streets.

Zone Three

Longer-duration on-street parking is found in this area. Parking is allowed both on Colley Avenue and the residential side streets. There are a few off-street parking areas.





III. E. Sidewalks and Paving

Throughout the study area the sidewalks are predominantly concrete. There are significant variations in the extent of paving and the relationship of paving to parking, lawn, planting and architecture. While many of the original granite curbs remain, in areas of recent redevelopment concrete curbs have replaced granite. In many areas, especially along Colley Avenue, the height of the curb is very low due to street repaving, and no longer is adequate to serve as a delineator of the street

Zone One

With a few exceptions, the concrete paving in this area extends from the property line to the curb. The width of the sidewalk varies from eight feet to twenty feet averaging about twelve feet. Numerous driveways cross the pedestrian zone. There are a variety of scoring patterns, textures and colors in the concrete sidewalks, and the condition of the concrete ranges from excellent to poor. In certain areas the sidewalk width is reduced to six feet, and a planting strip separates the walk from the adjacent parking. Along Colley Avenue the sidewalk consists of a narrow strip dividing on-street and off-street parking areas. At some intersections, standard concrete handicap ramps are incorporated into the curb.

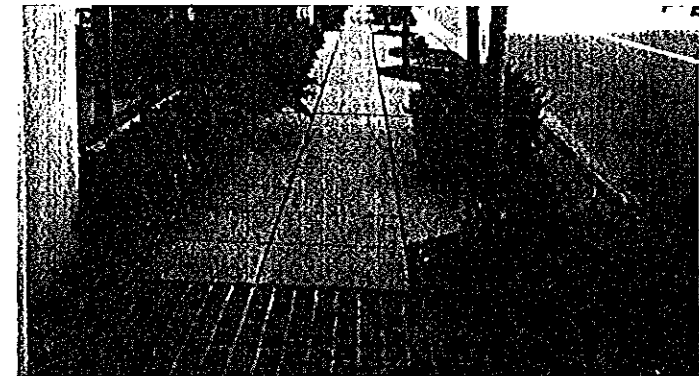
Zone Two

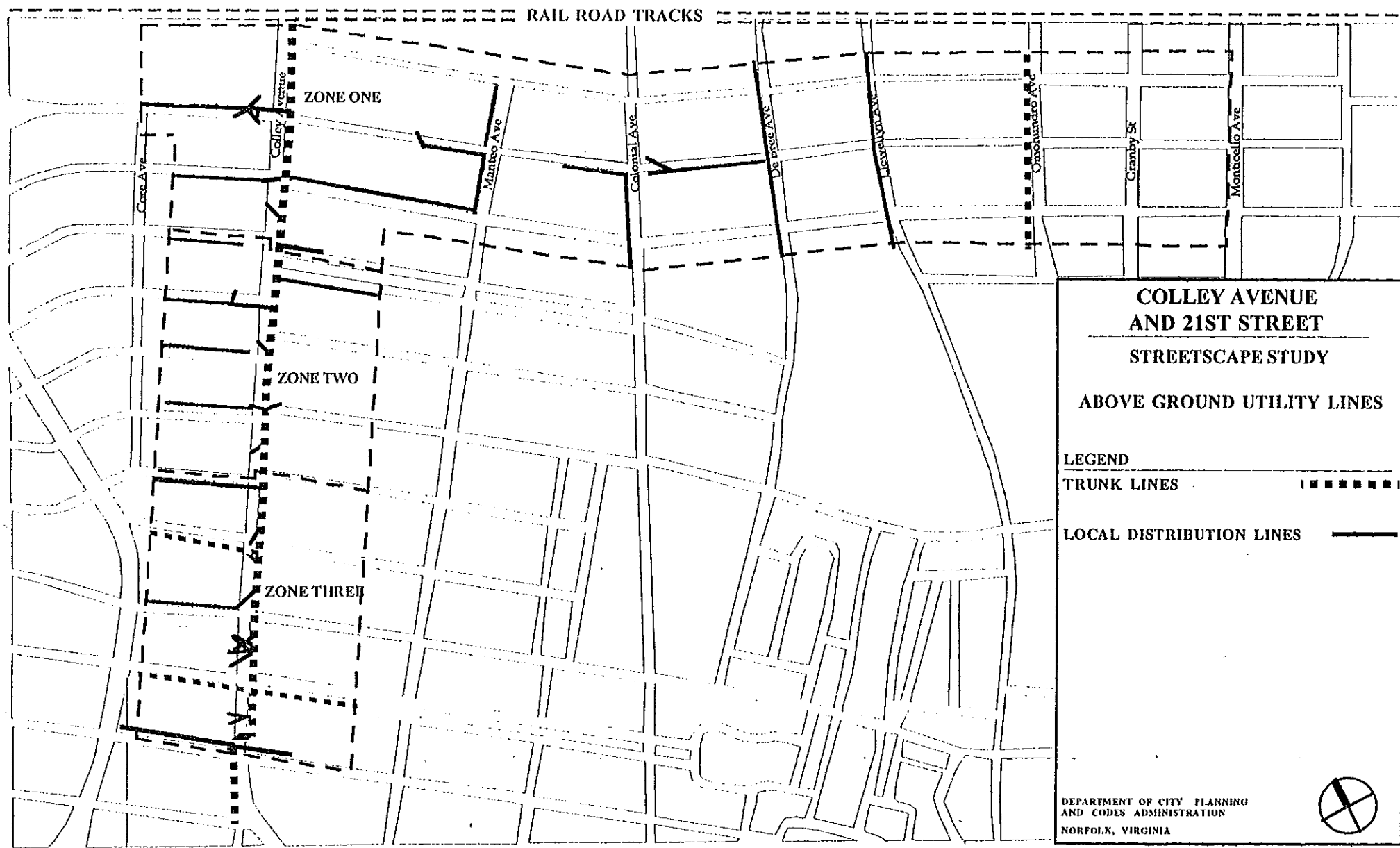
The sidewalks in this zone reflect the surrounding uses. In the commercial areas paving extends from the building to the curb. Walks up to twenty feet wide accommodate outdoor cafes. The paving fronting residential and institutional uses is greatly reduced in size. In these areas the five foot wide walk interrupts a lawn/planting bed which extends from property line to curb. In several cases the axis of the pedestrian pathway is interrupted by a sidewalk cafe which juts out into the walkway alignment. Two areas of decorative paving appear on the east side of

Colley Avenue and are limited to bands which are adjacent to the building. Concrete handicap ramps are incorporated into the curbs at intersections.

Zone Three

In the residential zone the five foot wide concrete paving is separated from the curb by a strip of lawn. The width of this grass strip varies from two feet to eight feet. The combination of sidewalk and tree lawn is a repetition of the paving/lawn pattern employed on the adjacent residential streets and visually strengthens the connection between the two areas. The handicap ramps at Westover Avenue are a combination of concrete and decorative Belgian blocks. This treatment is the standard in portions of the Ghent area. Elsewhere all handicap ramps are concrete.





III. F. Above Ground Utilities

Throughout this section of the city, the primary power lines are located on the north/south axis and connect to secondary lines on an east/west grid. On Colley Avenue these utility lines and the related poles are major elements in the urban landscape. The primary poles are about 55' tall with local electrical distribution lines located at the midpoint on the pole. Overhead traffic signals are strung across several intersections. The traffic control devices vary as the original pole mounted boxes are being replaced by equipment boxes placed on grade.

Zone One

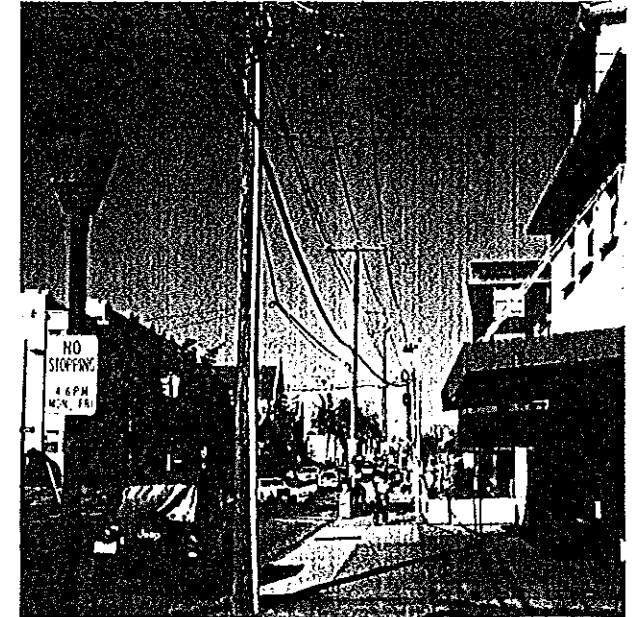
Along 21st Street the primary utility lines are located on the cross streets. Scattered secondary distribution lines are located parallel to 21st Street. These lines are on the south side of the street with individual connections extending across the roadway to buildings on the opposite side. These lines are carried by large wooden poles, several of which require stabilization by guy wires. Along Colley Avenue, a primary distribution trunk line runs along the east side of the street with secondary feeder lines running at right angles at most cross streets.

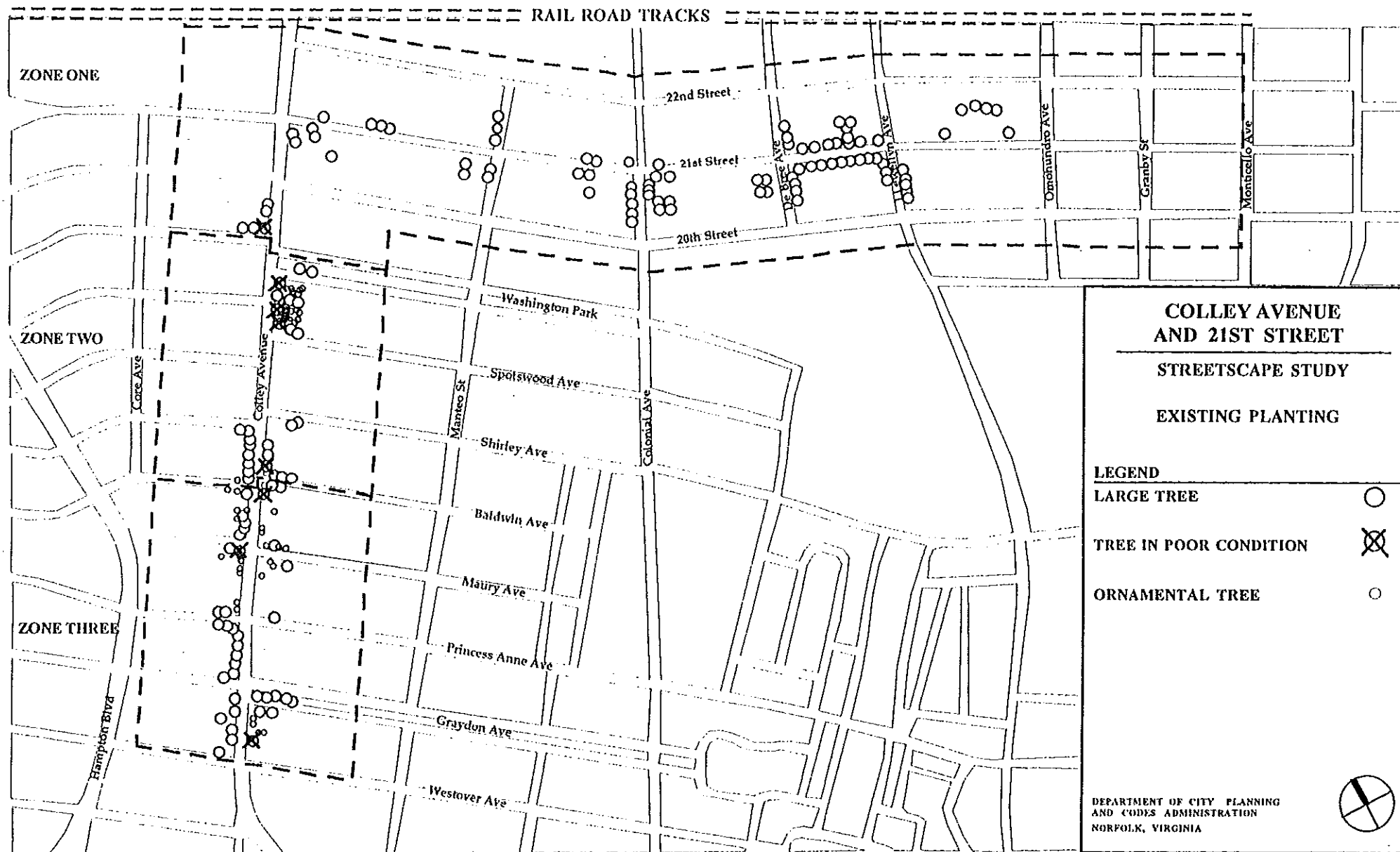
Zones Two and Three

Along Colley Avenue the primary power lines extend for the entire length of the study area. Wooden poles are located on the east side of Colley Avenue until Westover Avenue where they cross over the roadway and continue down the west side of Colley Avenue. Secondary lines tie into the primary lines at right angles.

III. G. Lighting

Street lights vary in size, style and intensity throughout the project. High intensity lights are mounted independently on both wooden and metal poles and attached to utility poles. While some of the independent poles have underground wiring, others are connected to overhead lines. A variety of goose neck fixtures include rectangular and circular lamps. Period carriage lights appear on both Colley Avenue and 21st Street. These black pole lights repeat those found on the residential streets throughout Ghent. The height of these fixtures varies from 10' to 14'. In addition to the light fixtures located in the public right-of-way, a variety of light fixtures ranging from shoe box to Victorian style have been installed by private developers. These fixtures, in close proximity to the sidewalk, are an integral part of the streetscape and appear as a part of the public lighting system.





III. H. Planting

No systematic street tree planting exists. Throughout the area a variety of species of trees and shrubs are planted in the right-of-way.

Zone One

Trees are planted in small beds in the paving, in tree grates and outside the public right-of-way. Of the trees planted on private property, some are in parking lots while others are planted in the spaces between the building and the street. Most of the trees in this area are relatively young and are in direct contrast to the mature species growing in lawn strips on the adjacent side streets. Many of the existing trees are small ornamental varieties. Honey Locust have been introduced in several projects. Limited plantings of shrubs, lawn and annual flowers are found along 21st Street. These beds are generally located inside the property line and relate more to the architecture or parking lots than to the street. An exception to this approach is the renovated Palace shops between Debre and Llewellyn Avenues, where shrubs, ground covers and perennials are planted in sidewalk beds. Planting at the north end of Colley Avenue is almost non-existent.

Zone Two

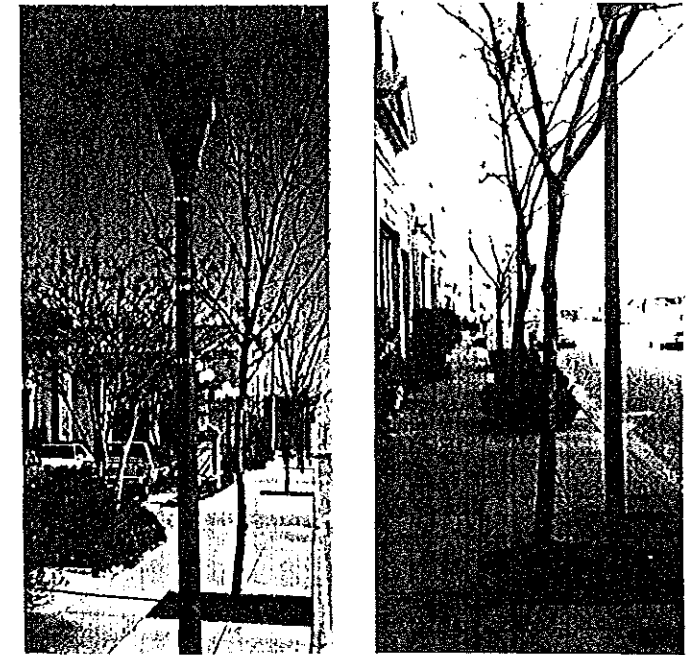
In the commercial areas, limited numbers of trees of several species are planted in sidewalk beds, with and without tree grates. They are incorporated into the cafe/sidewalk composition, and occasionally appear in lawn strips. The confined sidewalk plantings are in marked contrast to the open, more mature landscapes of Washington Park and Blair Middle School where a variety of deciduous trees, both mature and newly planted, are found.

Along most of Colley Avenue there are conflicts between existing trees and overhead utilities. The mature trees under the lines especially on the east side of the road have been severely pruned and are misshapen. Mature specimens planted inside property lines are also heavily pruned as a result of conflict with wires.

Shrub plantings are generally limited to the institutional and residential properties. However, seasonal flowers are important elements in the sidewalk cafes where they are planted in free standing, raised planters that serve to define the cafe area.

Zone Three

The trees in this area are planted in the linear tree lawns which parallel the curb. Mature specimens have been drastically pruned when in conflict with the overhead utilities. Many of these older, distorted trees are in poor health. Recently, replacement street trees have been planted along the roadway. Additional trees are planted in lawns which surround the apartment buildings. A row of older Willow Oaks on the west side of Colley Avenue, south of Baldwin Avenue, are in good condition and provide the only canopy in the entire study area.



III. I. Conclusion

The inventory of existing conditions reveals the following specific problems which detract from the visual character and the pedestrian experience within the study area.

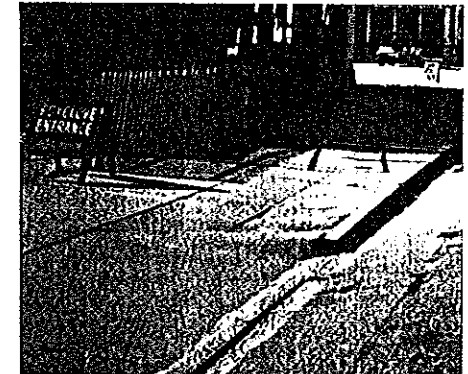
1. There is a wide diversity in architectural character, treatment, condition and scale.
2. There is a fragmented relationship between architecture and streetscape.
3. Driveway entrances disrupt the flow of pedestrians.
4. There is no strong definition of the edge and character of the pedestrian space especially along 21st Street.
5. The condition, finish and width of the concrete paving varies and is generally poor.
6. Above ground utilities disrupt the pedestrian walks and preclude the planting of large trees.
7. There is a diversity of style, height and intensity of lighting fixtures.
8. There is a wide variation in tree species, spacing, health and planting bed configurations.



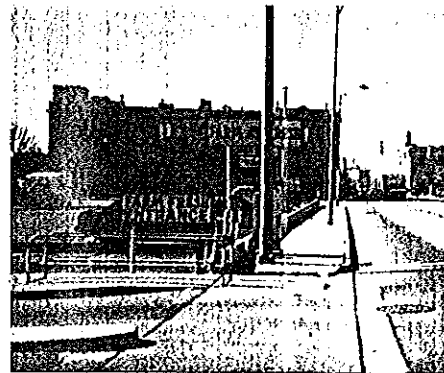
1



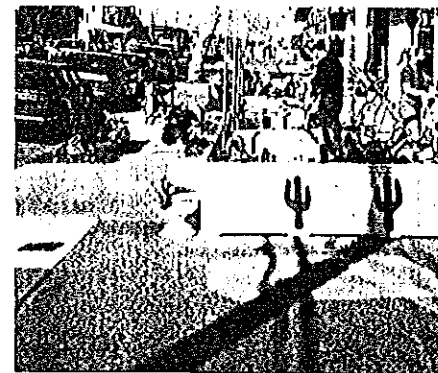
2



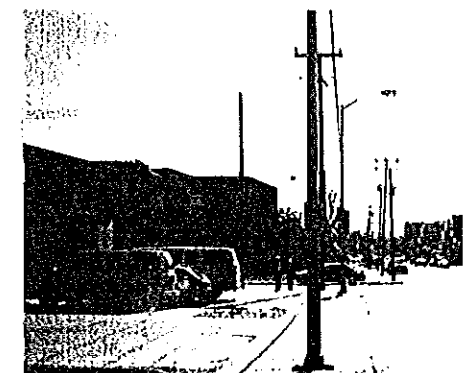
3



4



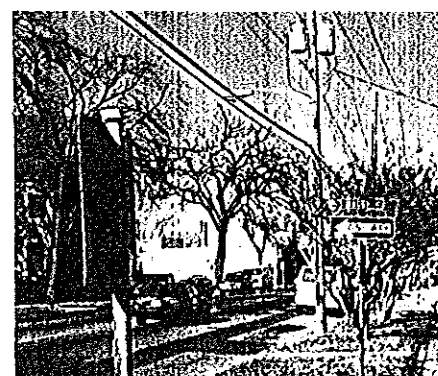
5



6



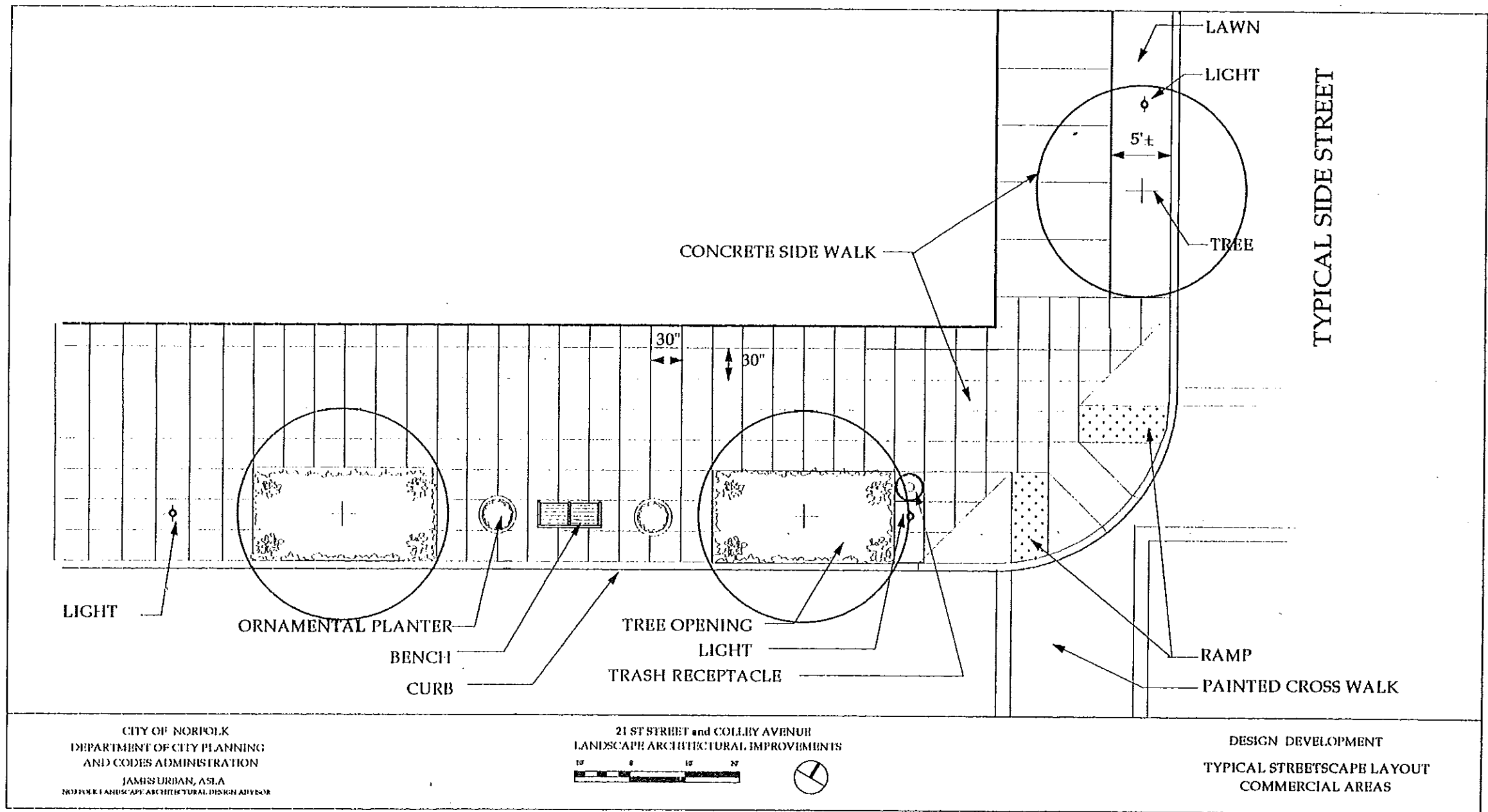
7



8

**A New Look for 21st Street and Colley
Avenue**

Design Principles



IV Design Proposals

IV.A. Project Goals

The goals of this study are to simplify and unify the project area through the introduction of a cohesive streetscape design and encourage an increase in commercial and community vitality.

The following objectives are essential to the achievement of the project goal:

- The introduction of visual unity and the articulation of a distinct image throughout the project area.
- The creation of a sense of place for the entire district.
- The establishment of stronger links to the adjacent neighborhood.

IV. B. Streetscape Concepts

Paving and Planting Areas

The majority of the existing paving in the project area is concrete, with variations in the condition, scoring pattern, finish and width. The result is a confusing ground plane. The connections and interruptions between the various paving segments are awkward and abrupt. There are numerous curb cuts and driveways which interrupt the pedestrian paving.

To achieve unity throughout the pedestrian walkway requires the removal of the existing paving and a reduction in the number of curb cuts. New concrete paving will be scored with a 30" saw cut grid. The 30" module begins at the back of the curb and continues to the face of the building. The concrete will have a light broom finish applied perpendicular to the walk axis. This

smaller pattern will better accommodate the many sidewalk widths and produce a more interesting, unifying paving pattern.

In commercial areas on both Colley Avenue and 21st Street, the new paving extends from the curb to the face of the building with trees planted in large tree openings. The minimum size of the opening should be 5'x10'. However, variations in conditions should be exploited to provide the largest opening possible. The preferred tree opening size is 7'6"x15'. In the residential area of Colley Avenue the proposed paving is reduced to a 5' wide walk separated from the curb by a 10'± wide lawn panel. In order to maintain a consistent sidewalk edge, a transition in the width of the lawn panel will accommodate the subtle shifts in alignment which occur from block to block.

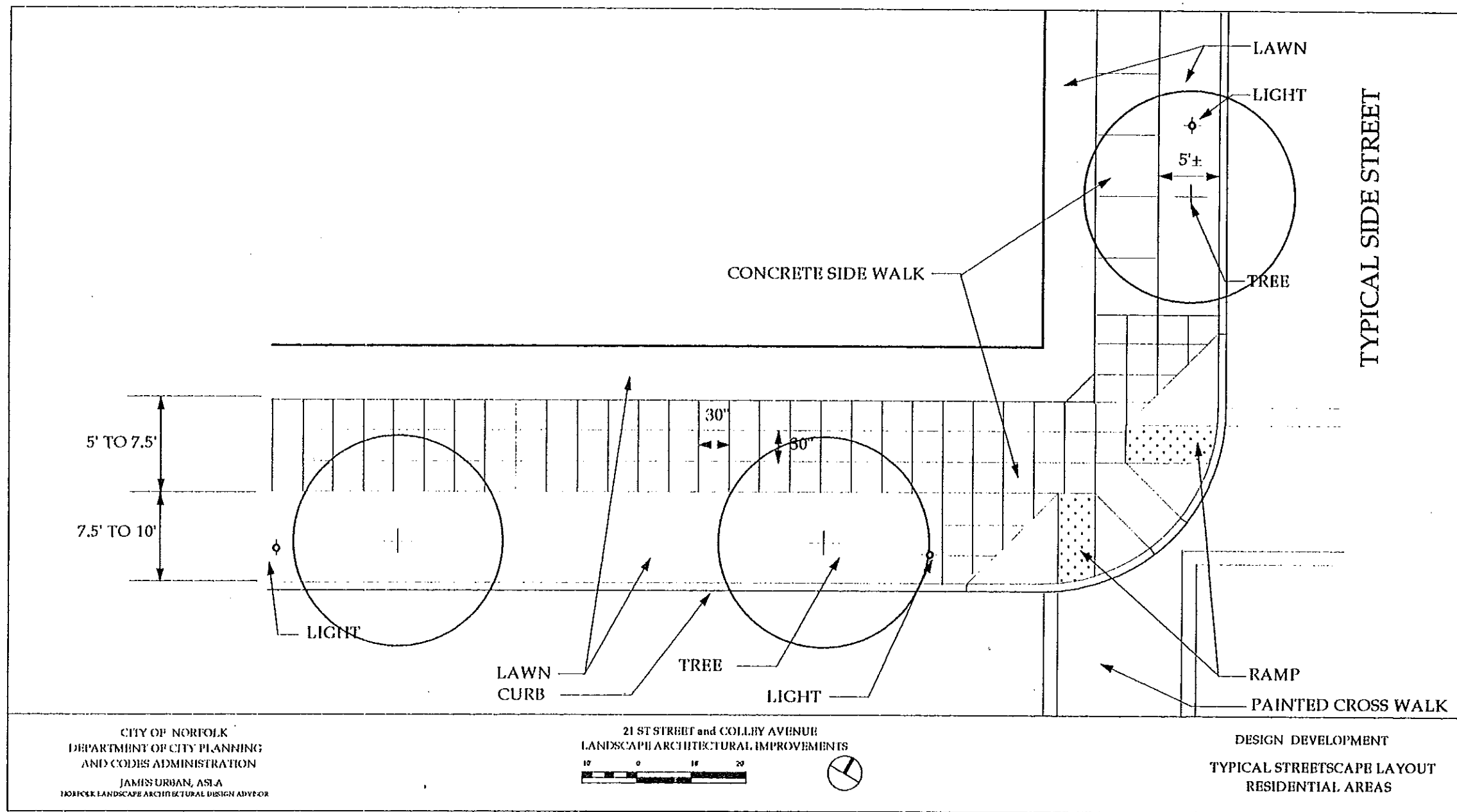
In order to introduce a smoother transition of the irregular right-of-way of Colley Avenue between Maury Avenue and Princess Anne Road and to eliminate the trapezoidal configuration of the cartway, the roadway should be realigned to conform to the standard 40' width found along the rest of the street. The west side of the street should be adjusted so that it is parallel to the curb on the east side. In this area the 5' wide pedestrian paving should be maintained parallel to the building face, and the new, wider lawn area will be trapezoidal to incorporate the shift in the roadway.

The intersections of the sidewalks along Colley Avenue with those on cross streets differ greatly from block to block. On side streets throughout Chent there is no uniform alignment between paving, lawn panel and curb, resulting in a variety of corner conditions. To insure continuity, all corners should be entirely paved. In an effort to reduce the visual confusion arising from the variety of sidewalk conditions, the project should extend down side streets. While each incoming street presents a

unique design problem and must be addressed on an individual basis, certain general guidelines apply. The new paving will wrap around corners and end at logical stopping points to be determined on a block by block basis, generally where the commercial buildings end. Sidewalk paving on the side streets should be scored using the City standard 4'-5' spacing. Street trees should be planted in existing tree lawns. The species planted should reflect the predominant species growing on the particular block. When the incoming lawn is not wide enough to support healthy trees, the tree lawn should be enlarged to the recommended 5' minimum width. The expanded tree lawn should be continued to a logical termination point, i.e. driveway, alley or property line, which would be determined on a block by block basis.

All paving and handicapped ramps must be built to meet the standards of the Americans With Disabilities Act. Crosswalks should be painted.

From an aesthetic and historic point of view uniform granite curbs would be the preferred project standard, and existing concrete curbs would be replaced with granite. However an alternative is to retain all existing granite curbs and construct new curbs of concrete. Many of the existing curbs on Colley Avenue are not high enough to function adequately due to past street repavings. In these areas, the curb should be raised. However, a minimum of 1.25% cross slope should be maintained on the adjacent sidewalk. Curbs at intersections should be realigned to increase the turning radius to a minimum of 15'. No radius should be larger than 20'. The width of driveway entrances to parking areas should be a maximum of 24' and they should be aligned perpendicular to the roadway. No parking area should have more than one entrance onto the main roadway if alternative access from a side street is available. Planting areas with low hedges are to be added to the back side of the sidewalk paving to separate the



walkway from the parking lots and gas stations that front Colley Avenue and 21st Street. Planting beds in the public right-of-way should be removed or simplified. Throughout the commercial areas uniformity in plantings of flowers and bulbs in containers and in planting spaces adjacent to walkways will be encouraged. The exception is planting containers which form the edges of sidewalk cafes. These should continue to be designs which reflect the style of the restaurant establishment.

At the corner of Colley Avenue and 21st Street, an extension of 22nd Street meets 21st Street close to the intersection. This street creates a hazardous turning condition. This street also precludes the planting of trees to end the plantings started on Colley Avenue. In cooperation with the affected property owners, the City should develop plans to redesign this intersection to move this street to the east side of the existing Burger King restaurant site.

In addition to trees, plant materials recommended for this streetscape include ground covers and shrubs. Liriope is to be planted as a ground cover in the tree planting openings. Groups of Daffodil bulbs should be planted in the Liriope beds. The hedges which serve as buffers to off street parking areas should be evergreen and maintained at a maximum height of 4'. Manhattan Euonymus is recommended.

Trees and Tree Life Support System

Trees

The implementation of a planting program will introduce street trees as the primary design element. The intent of the plan is to create a strong overhead canopy.

Red Sunset Maple (*Acer rubrum* 'Red Sunset') is the recommended street tree for 21st Street. The open canopy and fine texture of this species compliment the commercial character of the area without obscuring

adjacent building signs. The tree has light green leaves in summer and brilliant red fall color.

The recommended street tree for Colley Avenue is the Willow Oak. It is already the dominant tree on the street. The Willow Oak is a large shade tree which is tolerant of urban conditions and is fairly uniform in form and size. It provides a high canopy and has small dark green leaves with yellow/brown fall color. This tree will contrast sharply with the selection of Red Maple on 21st Street.. Existing Willow Oaks in good condition should be retained.

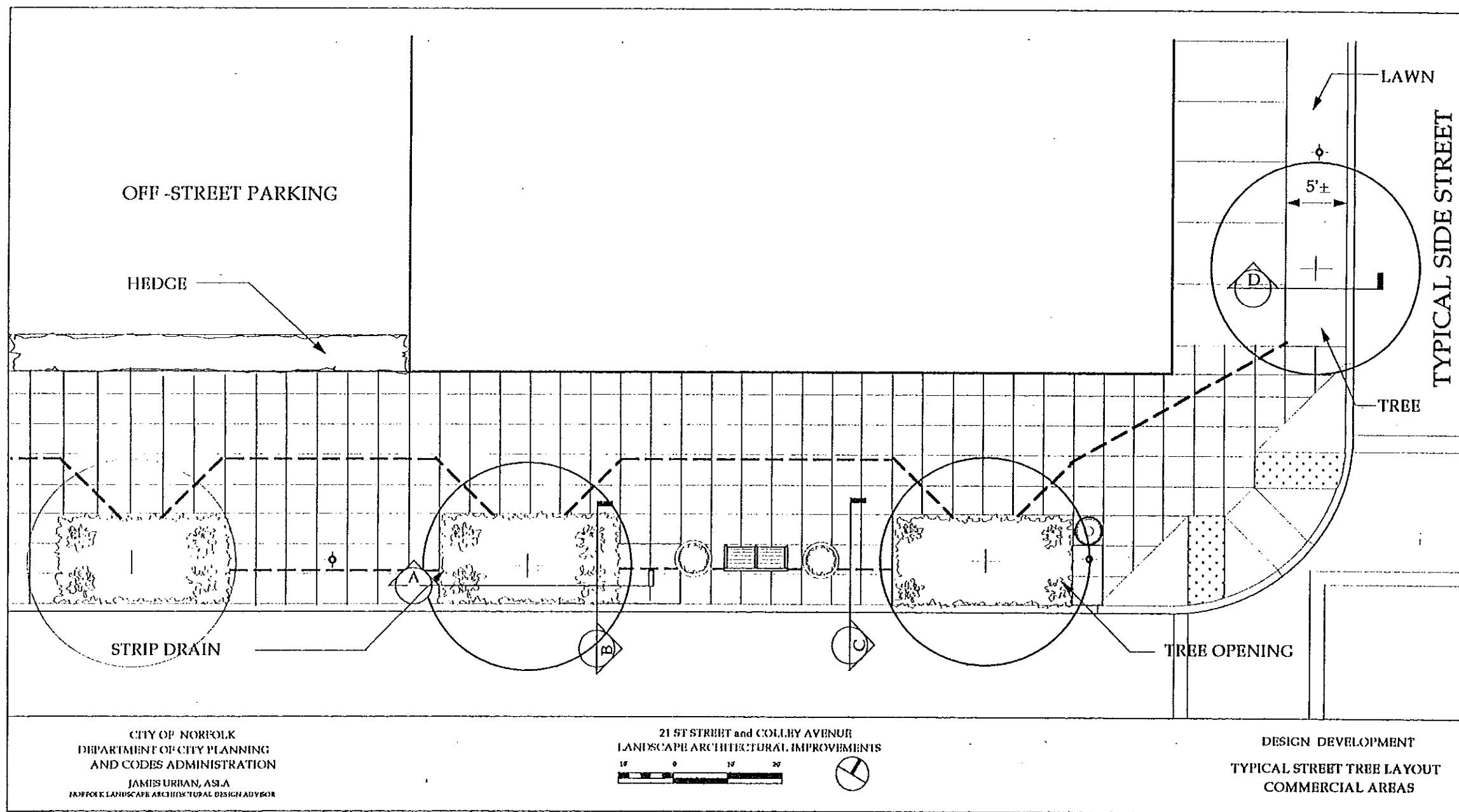
In areas on both streets where there are conflicts with overhead utility wires, the street tree must be a small to medium tree which will not conflict with the lines. The Japanese Scholar Tree (*Sophora japonica*) is recommended. This tree will grow into the telephone and cable lines at the lower elevations on the poles but can be maintained below the primary electrical distribution wires on the top of the poles. Where there is an opportunity to place the Sophora on the back face of the walk rather than directly beneath the utilities, this should be the preferred location.

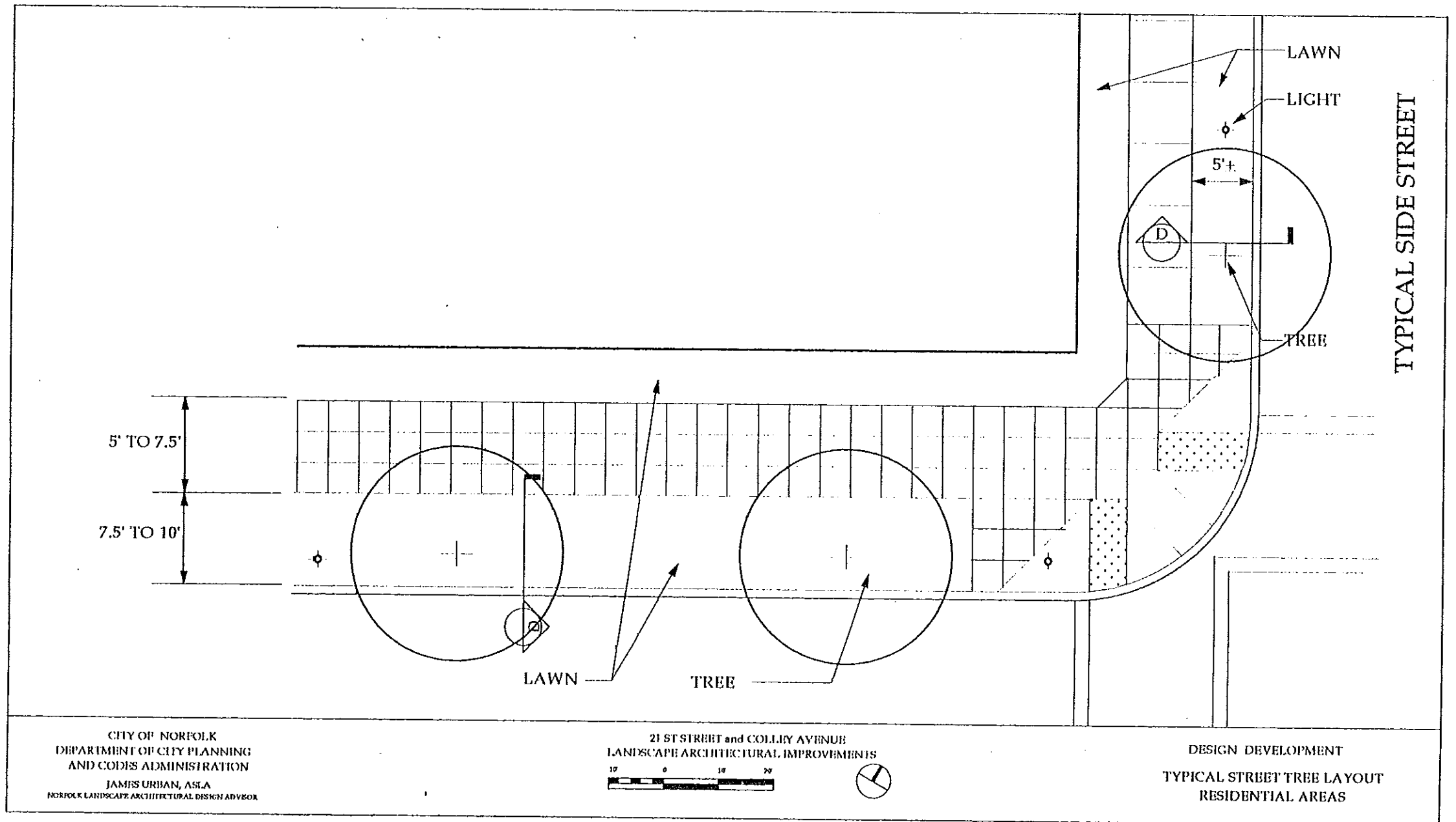
Along Colley Avenue, several unique conditions have been identified which effect the street tree strategy and necessitate alternative solutions.

- When other species of large canopy trees, planted on the west side of the street are in relatively good condition, they should remain. As their condition deteriorates, they should be replaced with Willow Oaks.
- Existing Crepe Myrtles along Colley Avenue should be removed and replacements made as outlined above.

- Trees which are growing between the back side of the paving and existing buildings, should remain as long as they are healthy and attractive.
- At the lawn strips adjacent to the Colley Avenue underpass beyond 21st Street, closely spaced (30' on center) large canopied Tulip Poplar (*Liriodendron tulipifera*) should be planted. Its strong vertical trunk and bright yellow fall color make it a dramatic terminus to this street. In order to accommodate this planting on the east side of the underpass, a planting area needs to be developed within the area of an existing street. This planting area is also in conflict with the power lines above. Both the street conflict and the utility wire conflict must be resolved prior to implementing this recommendation.

Where conditions allow, large canopy trees should be planted in the rights-of-way of adjacent side streets. The extension of street trees into cross streets unifies the plan and provides a visual transition from commercial to residential areas. Supplemental tree planting on side streets should either repeat the predominant species growing on that particular street or reflect the selected species on the main street. On those streets intersecting with Colley Avenue, Willow Oaks should be planted. Red Maples should be planted on the side streets along 21st Street.





The Tree Life Support System

Every tree planted will be provided with adequate growing conditions to support the size tree selected. Growing large canopy trees in commercial areas is difficult and requires extraordinary measures to be successful. The design goal is to incorporate the greatest number of large trees without adherence to a consistent geometry. Wherever possible, trees should be located at even intervals along the curb line. However, the first priority should be to plant trees in the most suitable growing locations so that the largest possible canopy can develop. A variety of existing conditions throughout the project area necessitate a number of planting recommendations.

1. Plant trees in areas where large soil volumes can be located without creating conflicts with paving. The ground plane will be planted with ground cover or lawn as is appropriate to the specific planting area.
 - In areas where the sidewalk width is sufficient, narrow the sidewalk and make continuous planting areas adjacent to the curbs. Provide new or amended soil.
 - In areas where there is a planting strip on the abutting property, the tree line should be moved to the back side of the walk so that the soil zone the of trees can interconnect with the soil on the adjacent property.
2. In areas where the proposals in Item 1 are not practical, trees are to be planted at the curb in openings which are a minimum of 15' long. In areas where the width of the sidewalk is sufficient, make the tree opening 7.5' wide. In those areas in which trees are needed but there is insufficient sidewalk width to accommodate the 7.5' opening, the width of

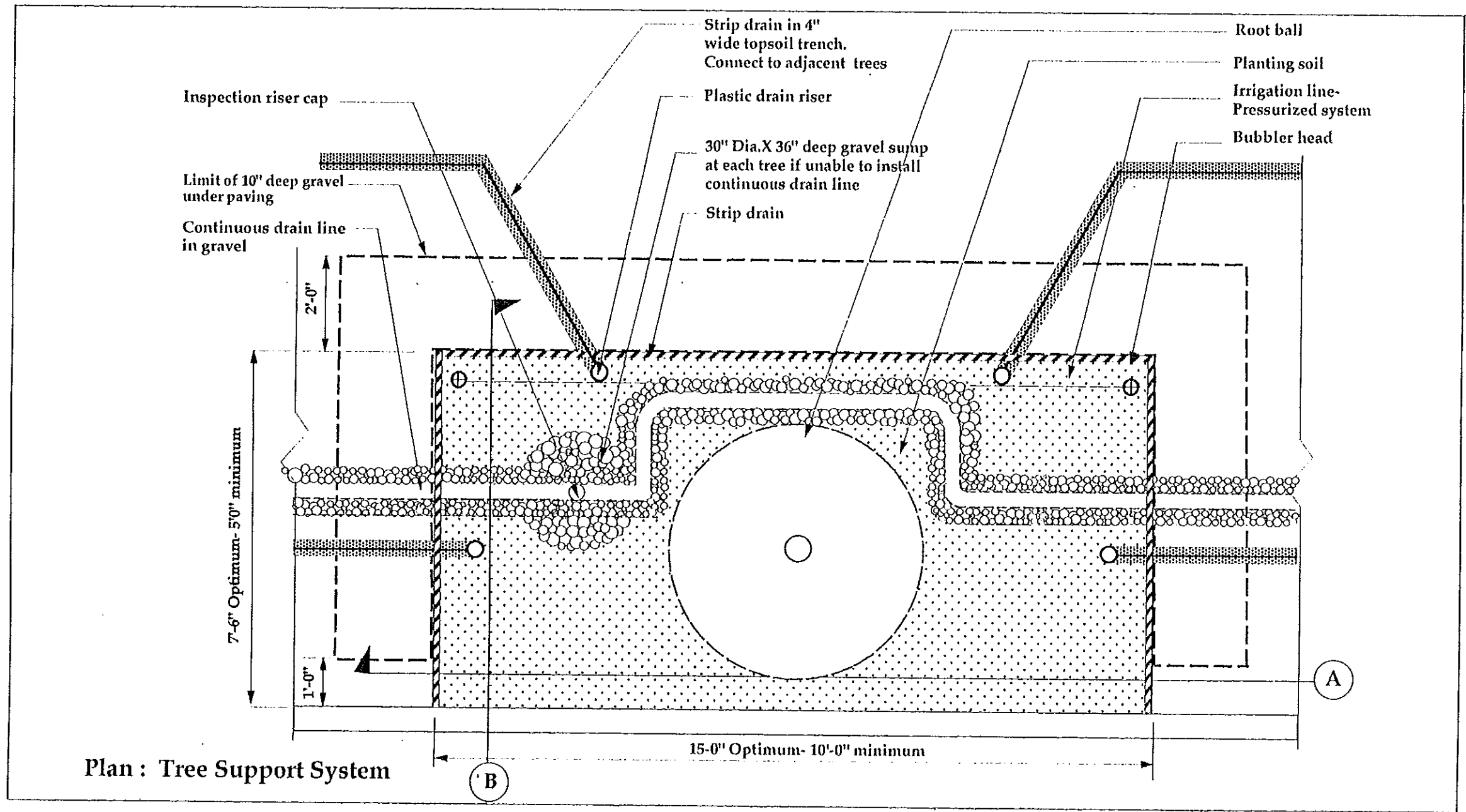
the tree opening may be reduced to a minimum of 5'. Expand and interconnect the soil zone under the pavement using narrow (4" wide) trenches cut 12" deep into the compacted subgrade material which are set radially from the tree opening and interconnected from tree to tree. The trenches will be filled with a plastic strip drain material that will function to bring air and water into the trench and topsoil. These trenches will be covered with the concrete sidewalk.

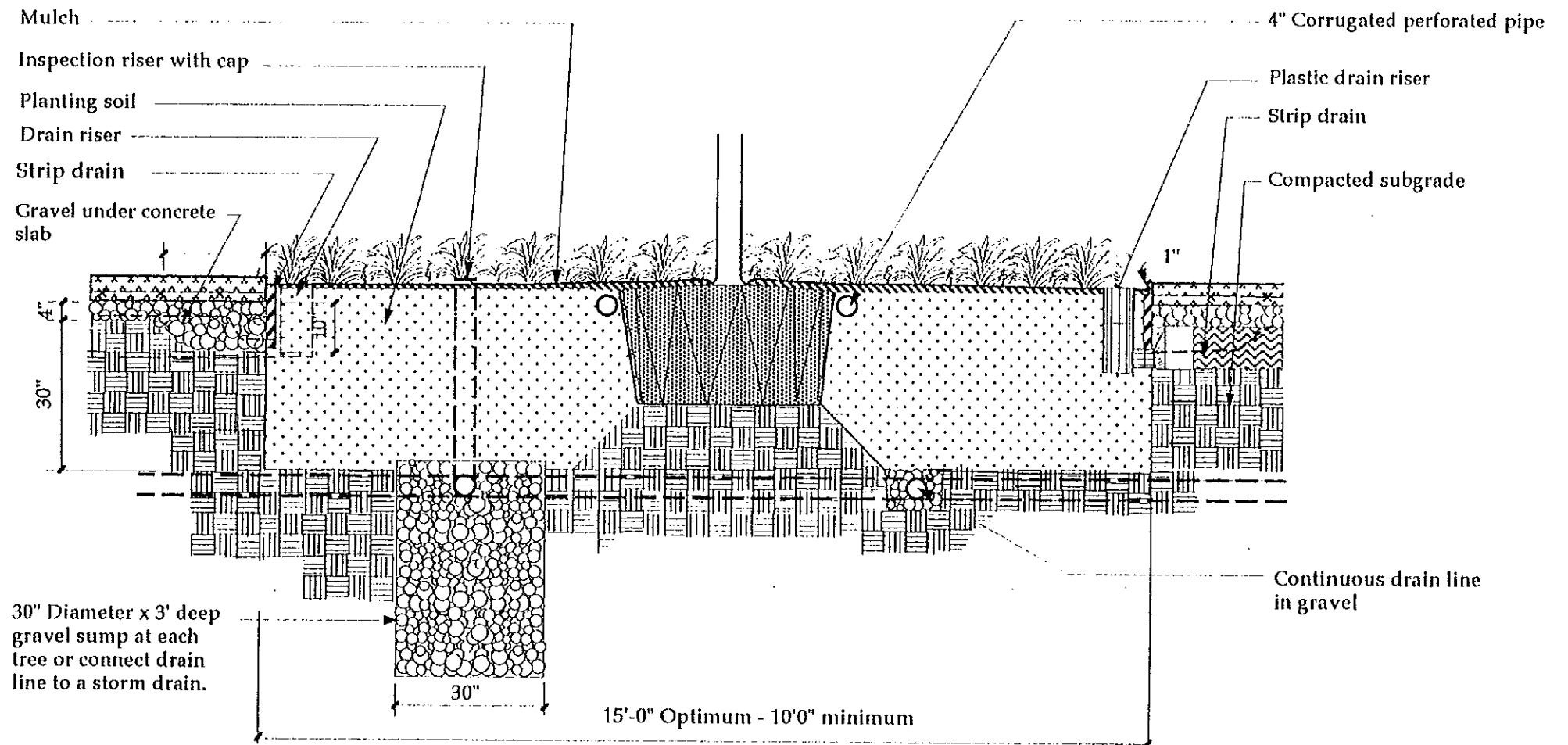
The individual tree openings will be planted in ground cover. In all cases, provide the largest practical soil volume of sandy loam or amended existing soil. Provide adequate drainage and irrigation. Drainage may be either a perforated drainline or a series of drywells. Attempt to interconnect drainlines wherever possible. Irrigation may be either a conventional pressurized system or passive watering tubes at each tree as shown on the drawings. The intent of these systems will be to assist in the establishment of the trees. After establishment, it is expected that the trees can be slowly withdrawn from regular water and the system used to supply water only during periods of drought. Raised controller boxes and back flow preventer valves must be installed at regular intervals along the sidewalk accessible by Department of Parks and Recreation maintenance personnel who will be responsible for tree maintenance.

3. In the most difficult to plant locations where narrow sidewalks, utility conflicts, driveway entrances etc. make the cost of tree planting disproportionately high to the rest of the revitalization area, do not plant trees.
4. When the opportunity arises adjacent property owners should be encouraged to plant the typical tree of the street in areas which may be available near their front

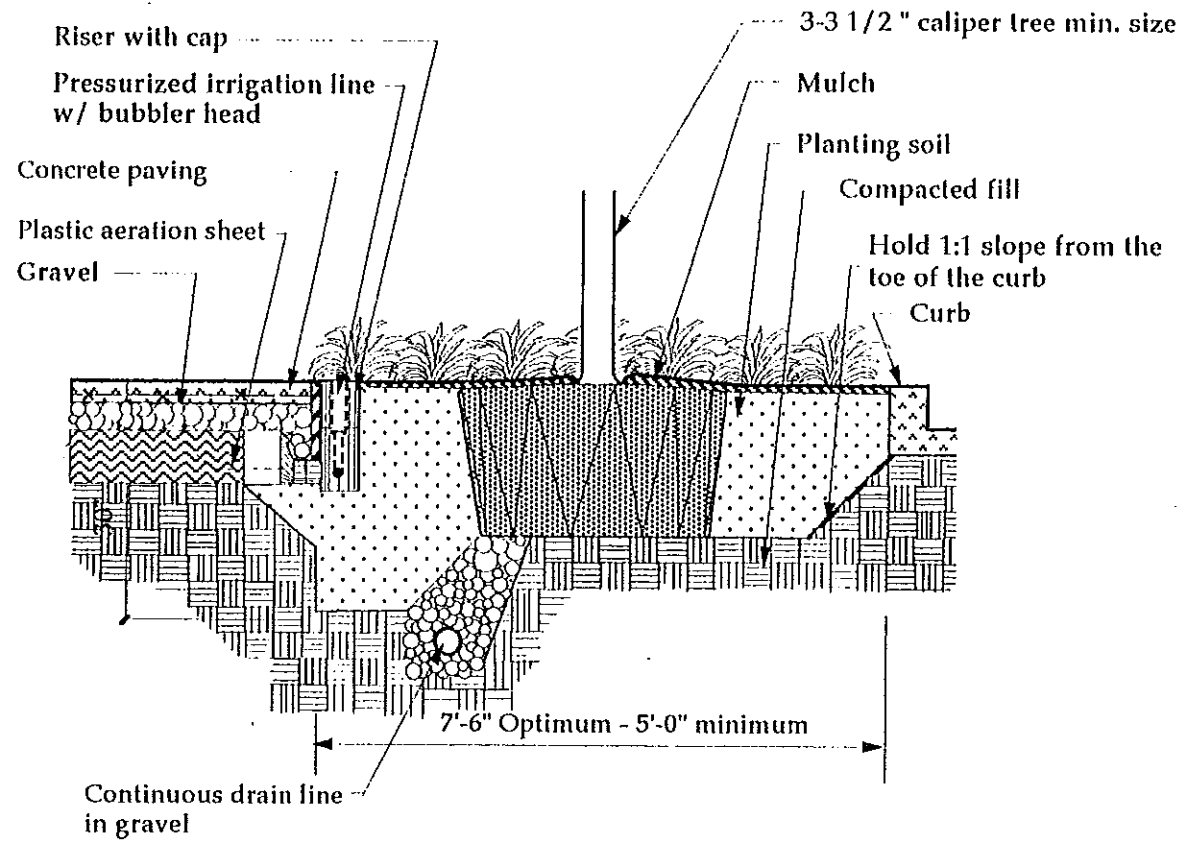
property lines. Trees planted on the back side of the sidewalk may be of an alternative species to the recommended street tree as approved by the Department of Parks and Recreation. A supplemental program should be established in which owners of adjoining properties would grant the City permission to plant trees on these private lots.

While most of the underground utilities are located beyond the tree planting areas, conflicts may arise between proposed trees and existing utilities. Modifications to the standard tree support details during the development of construction drawings should resolve these conflicts.

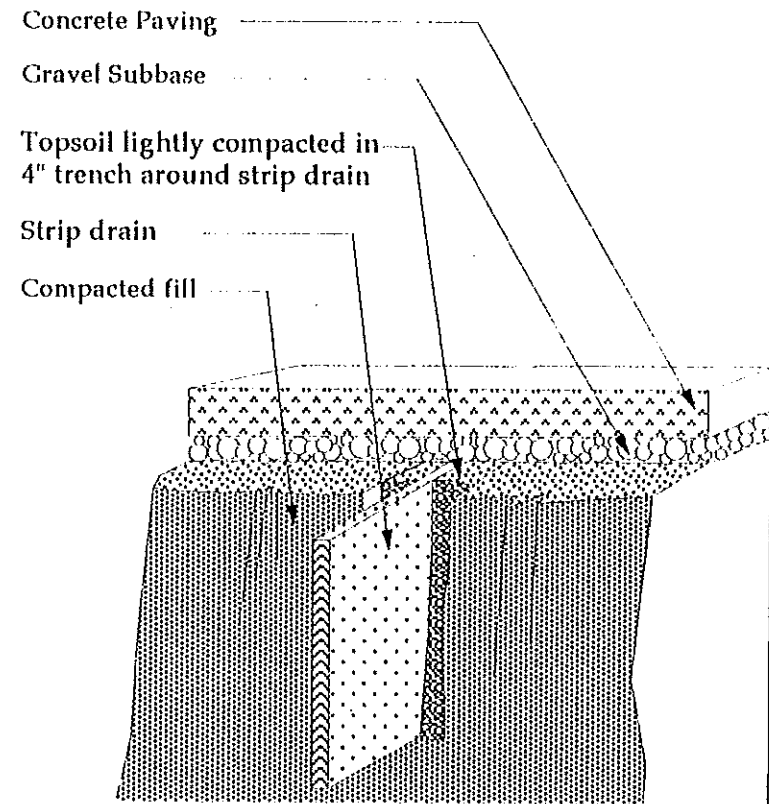




Detail A: Tree Support System
Section Parallel to Curb

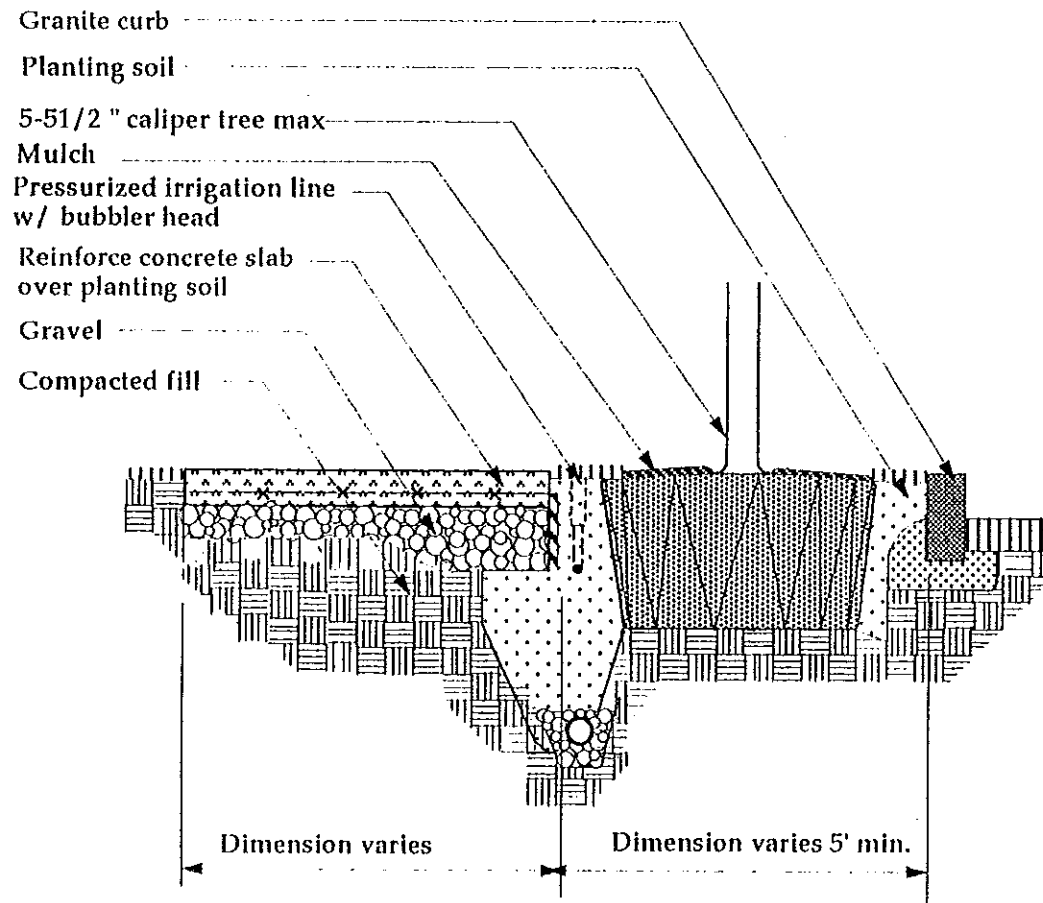


Detail B: Tree Support System
Section Perpendicular to Curb

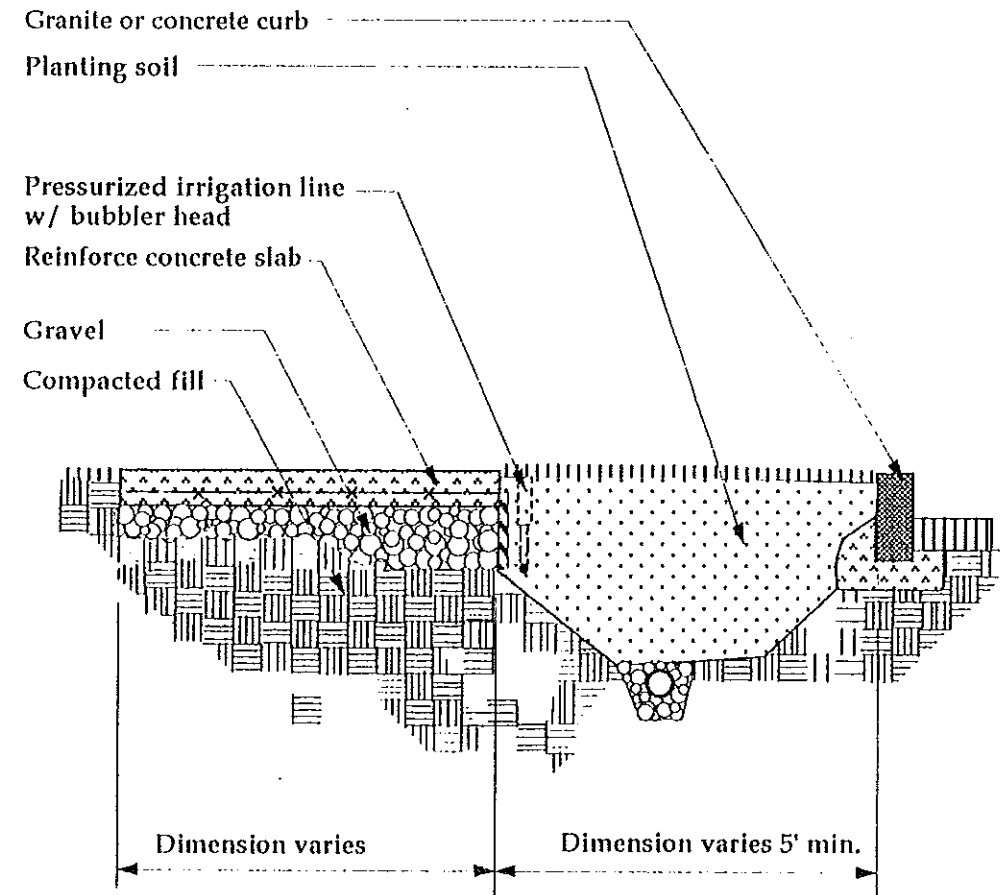


The strip drain is "Akwadrain 112" as manufactured by American Wick Drain Co., Matthews, NC, 28105 (800) 242-9425 or approved equal. Use end caps and connectors supplied by manufacturer. See Detail F.

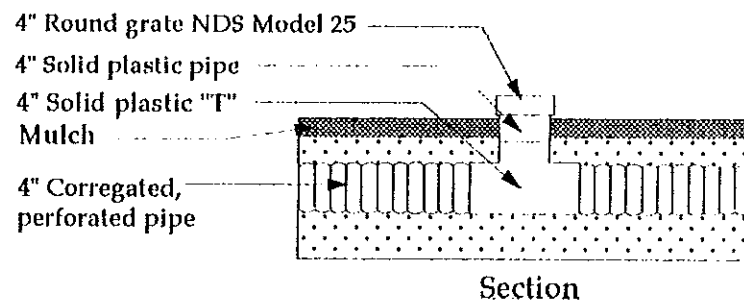
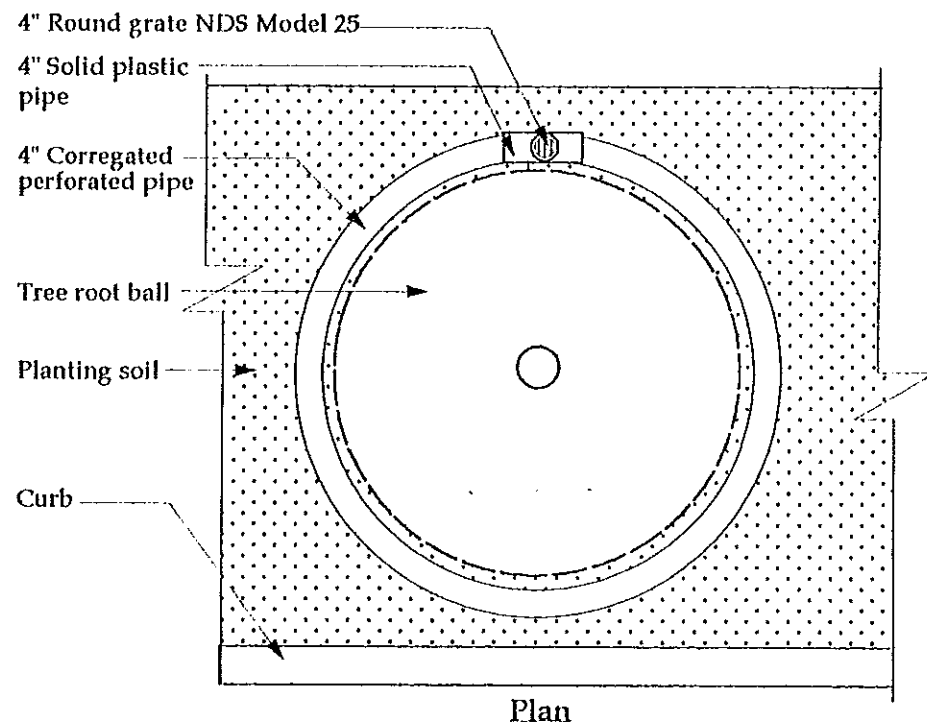
Detail C: Tree Support System
Section Between Trees



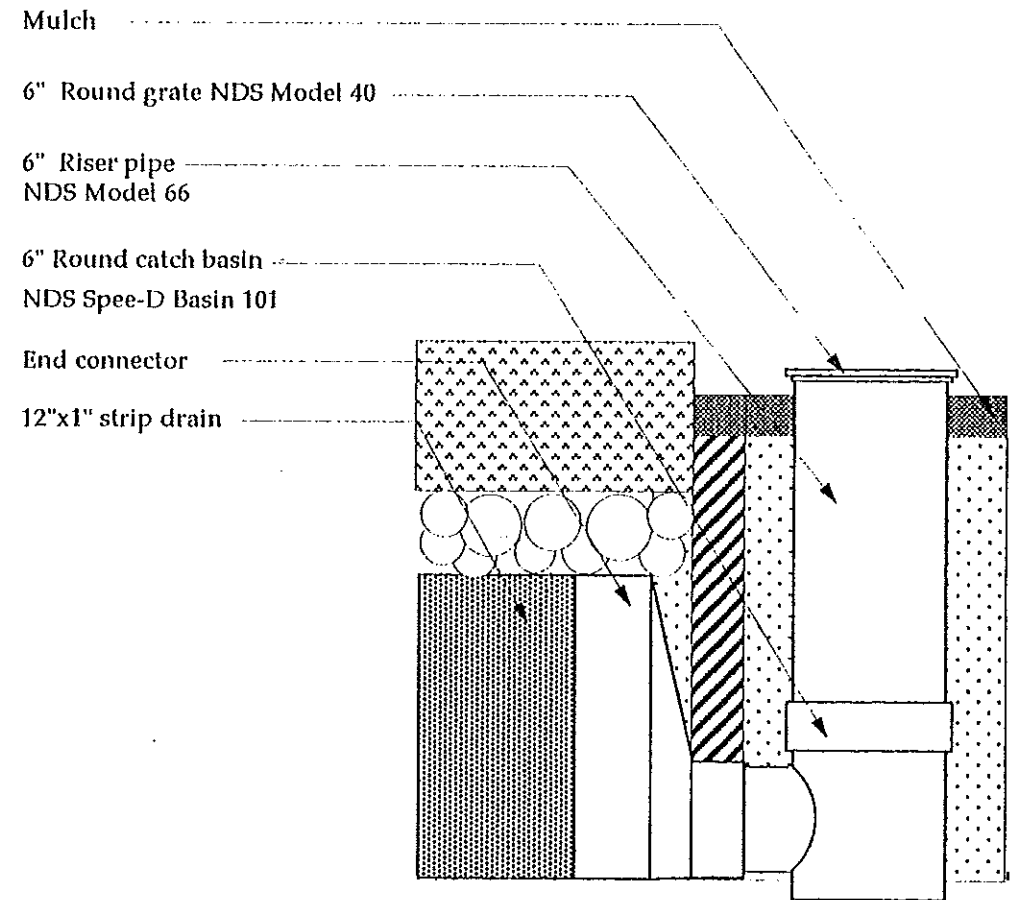
Detail D: Trees in Lawn



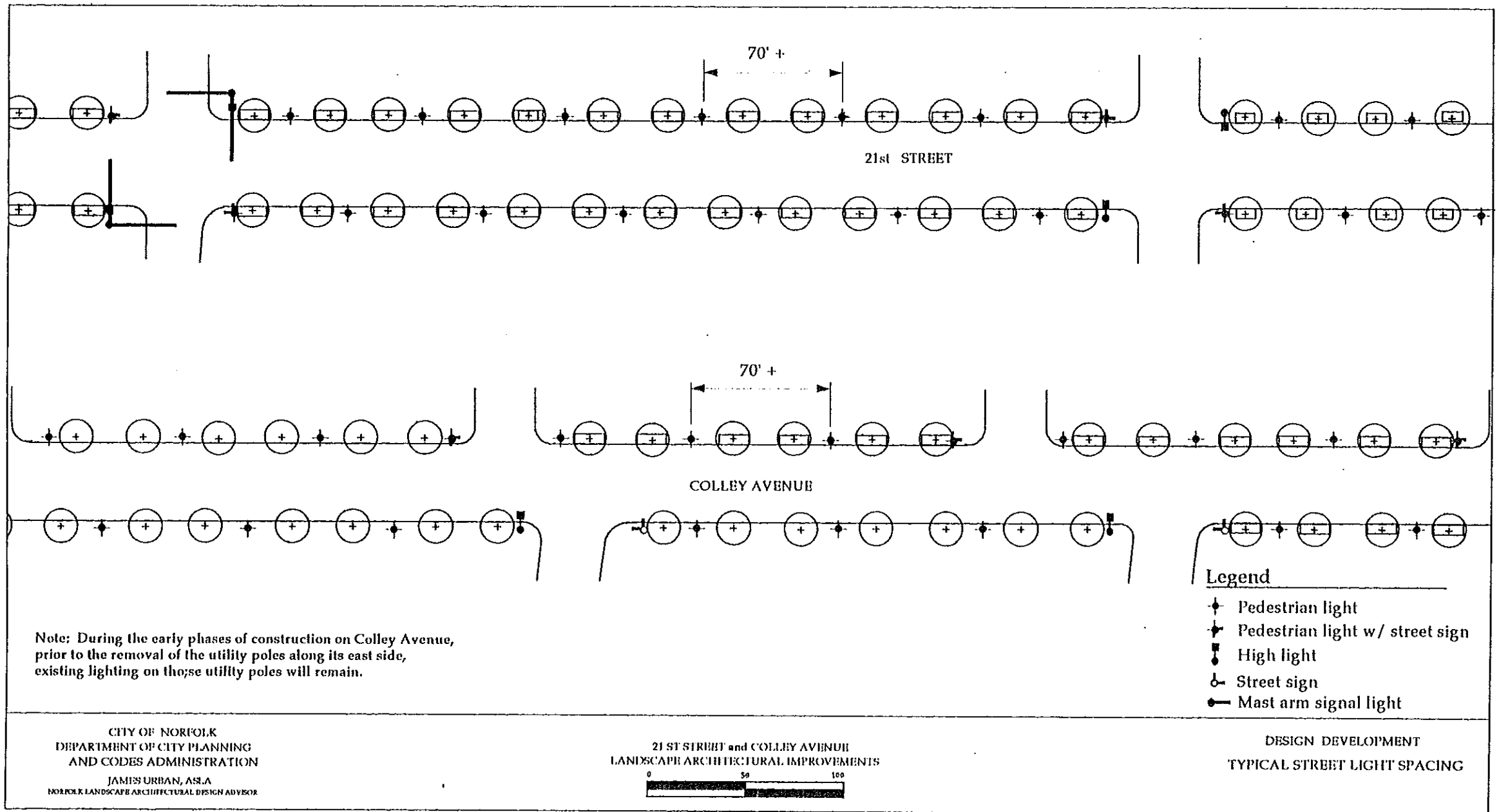
Detail E: Trees in Lawn - Section Between Trees

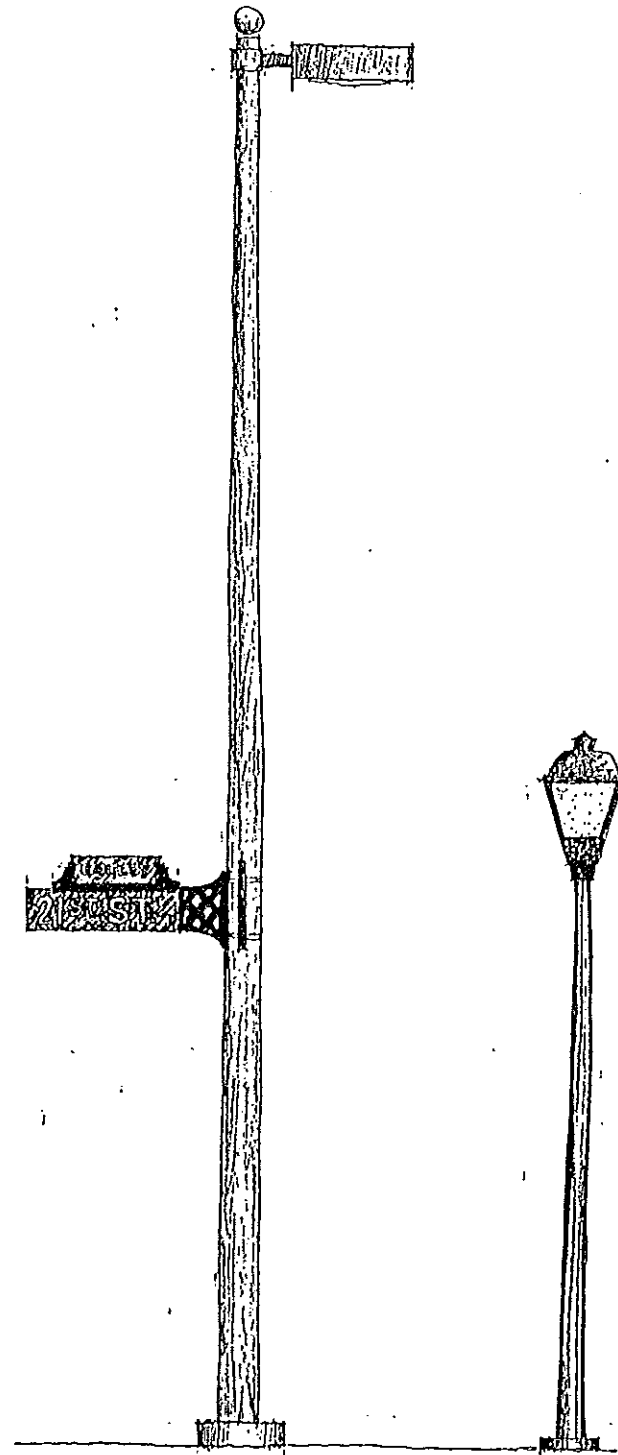


Detail F: Optional Passive Tree Watering Tube



Detail G: Strip Drain





Street Lights

The diversity of existing lighting fixtures contributes to an overall sense of confusion. Two fixtures, one pedestrian in scale and one vehicular in scale, are proposed to replace all of the existing lights.

The recommended pedestrian light fixture is the "Traditionaire" manufactured by McGraw Edison as supplied by Virginia Power. The light fixture is to be mounted on a 10' round tapered pole. This light, in black, is currently found throughout the residential areas of Ghent and appears sporadically in the project area. The adoption of this fixture will strengthen the visual connection between the commercial and residential sections in Greater Ghent. The pedestrian light fixtures placed directly on 21st Street and Colley Avenue will be painted Norfolk green. The new fixtures placed on side streets leading to 21st Street and Colley Avenue will be painted black to reinforce the distinction between residential and commercial areas. Commercial developments in the area are encouraged to use this fixture either to replace existing lights or where new fixtures are needed. Fixtures on private properties should be black. The green street side lights will help make this area unique.

To provide greater lumination at intersections, larger fixtures on 30' poles will be placed at the corners of the blocks. These poles will be the City downtown standard tall pole without its decorative base. A simple bolt covering should be used. This round tapered pole repeats the form of the carriage lamp pole. Wherever needed, traffic control lights will be mounted on these poles. All connecting electrical lines serving both fixtures will be installed underground. This standard lighting pattern will extend along Colley Avenue from the intersection of Westover Avenue to the railroad underpass and on 21st Street east from Core Avenue to Monticello Avenue. The tall pole fixtures should be painted Norfolk green.

Site Furnishings

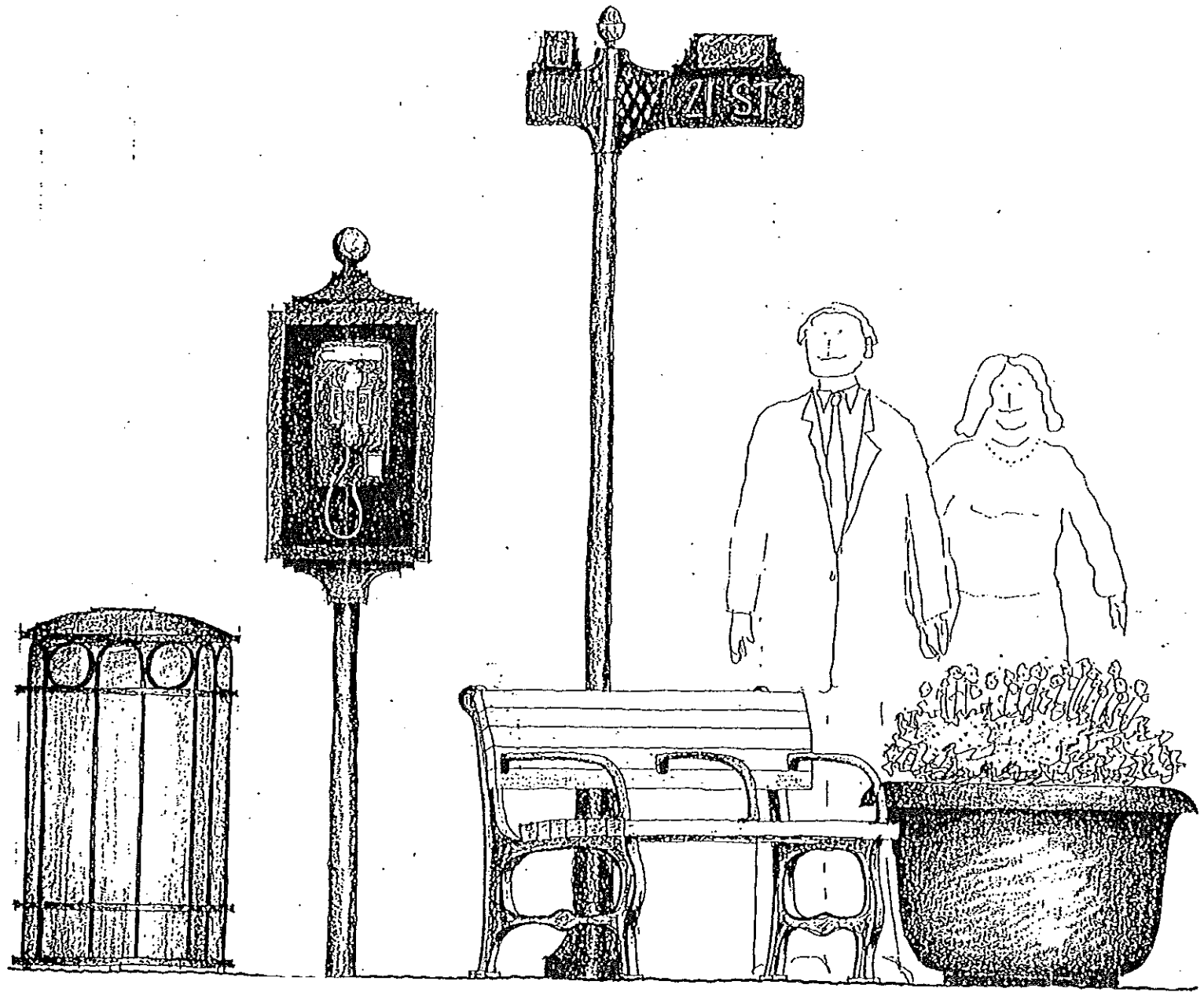
Site furnishings serve to enrich the landscape and provide for the basic needs of the pedestrian. Benches, planters, telephones and signs are all critical elements found in the urban landscape. The repetition of standard features throughout the project unifies the streetscape and identifies the individual blocks as parts of a greater whole. In general the elements chosen are somewhat unique to the Ghent area and are intentionally different from the downtown standards. The furnishings selected have a familiar traditional styling reminiscent of earlier park and garden furniture. The use of Norfolk Green is the common element that ties this special commercial district to the larger image of the city as a whole. All furnishings should be painted Norfolk green.

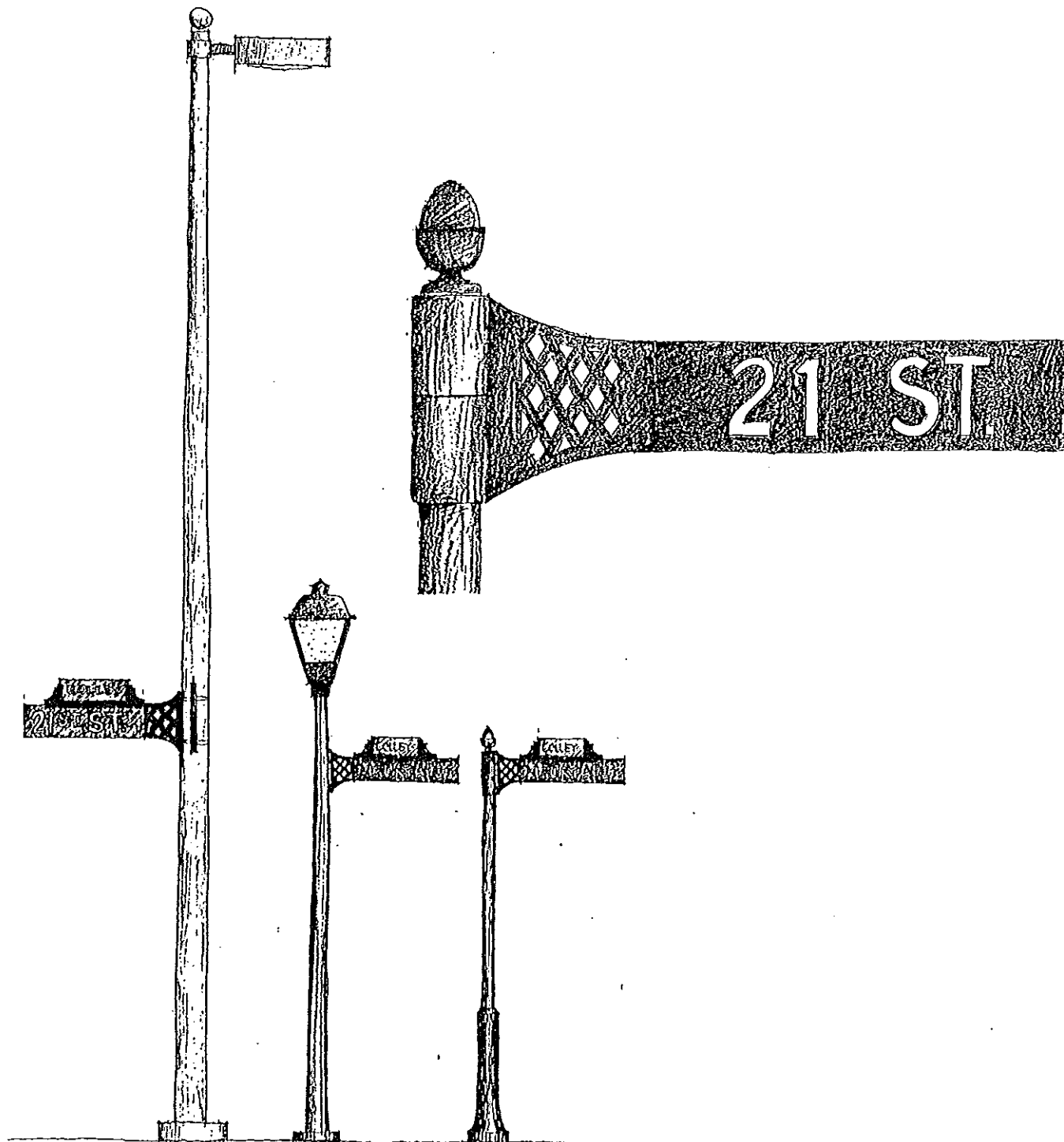
Trash receptacles constructed with steel frames and domed lids are to be placed two per block along 21st Street and one per block on Colley Avenue. Victor Stanley model PSO-32 is recommended.

Benches constructed of cast iron and wood are to be placed three per block on 21st Street and one or two per block along the commercial areas of Colley Avenue.

Fiberglass flower planters will provide seasonal flower color throughout the commercial area. The planters will be located on an average of 4 per block along 21st Street and 2 per block on Colley Avenue. Landscape Forms AA-1009-36-27 is recommended.

As public telephones contribute to the vitality and efficiency of the pedestrian environment, in Zones One and Two one phone should be located on each block face. Pedestal mounted, traditional telephone enclosures are best placed at the ends of the blocks. To reduce traffic noise, locations on adjacent side streets are preferable. The Traditional Enclosure distributed by Phillips & Brooks, Inc. is recommended.





Street and Traffic Signs

The frequency and distribution of traffic control signs need to be reevaluated and the number reduced. All parking regulation signs should be the smallest size permitted in the Uniform Traffic Code Devices Manual

The existing street identification signs vary in size, height and style. Original, ornamental street signs stand at the corners of Colley Avenue and Baldwin and Brandon Avenues. The replication and placement of these historic signposts is recommended for use throughout the Ghent area. The custom aluminum pole and bracket would be Norfolk green and the individual street sign panel white lettering on a field of blue. In addition to the pole sign, a new sign in the same design motif is needed where street signs are to be mounted on light poles. At signalized intersections, a modified ornamental bracket of larger proportions will be installed on the signal post.

Product Information

Bench: 5'10" frame of Norfolk green color-coated cast iron with wooden slats. Bench shall be Restoration model 2004-6 as manufactured by Timberform/Columbia Cascade Co., Portland, Oregon, or approved equal.

Drain line: 3" or 4" diameter corrugated, perforated, polyethylene drainage tubing (ASTM F 405-76) fittings, "T", "Y", end caps, and splices shall be compatible fittings by the same manufacturer. Drain line is to be as manufactured by Hancor: Finlay, Ohio, or approved equal.

Filter cloth: Non-woven continuous filament polyester fabric. Weight 4.0 oz. per square yard; min. strength 100 lb.; water flow rate, 150 G.P.M./ square foot: delivered in 15 feet wide rolls minimum. Filter cloth shall be Geolon N 40 as manufactured by Nicolon Corp., Valpariso, FL, or approved equal.

Gravel: Coarse crushed aggregate meeting the requirements of AASHTO M 43 Size 57 with the following grading requirements.

Sieve Designation	Percent Passing
1-1/2 inches	100%
1 inch	95 - 100%
1/2 inch	25 - 60%
#4	0 - 10%
#8	0 - 5%

High Light: Light fixture shall be the "Ultra Style" #66.3034 as supplied by Virginia Power. Pole to be cold rolled, round tapered steel pole #11GA (.1196) as manufactured by the Union Metal Manufacturing Co., Canton, Ohio. Pole top #100-J1 as manufactured by Union Metal Manufacturing Co. Custom color.

Inspection riser: PVC plastic, non-perforated 4" diameter pipe ASTM D3034 Type PSM with PVC "T" or "L" at the bottom to connect to the drain line and a PVC screw cap at the top.

Irrigation lines, heads and controllers: All irrigation system designs shall be as approved by the Department of Parks and Recreation for each project.

Norfolk Green: Color selection for paint shall be Federal Standard 595-B, 1989 "Federal Standard Colors" #14062. Color selection for fiberglass and polymer power coating shall be "RAL" color #6028.

Pedestrian Light: Light fixture shall be the "Traditionaire", manufactured by McGraw Edison, as supplied by Virginia Power, mounted on a 10' round tapered pole. Custom color.

Planter: Fiberglass flower planter, 36"x27" shall be Tulip planter #AA-1009-36-27, custom color, as manufactured by LFI/Landscape Forms, Kalamazoo, MI, or approved equal.

Planting Soil: The planting soil for all tree and lawn planting areas shall be a mixture of top soil and composted organic matter as approved by the Department of Parks and Recreation for each project.

Strip drain: Plastic, three layer drainage material, 12" wide with a plastic core wrapped in filter cloth. Strip drain shall be Akwadrain 112 Strip Drain" as manufactured by American Wick Drain Corporation: Matthews, NC, or approved equal.

Telephone enclosure: Pedestal mounted, traditional as manufactured by Phillips and Brooks, Inc.

Trash receptacle: 24 gallon steel receptacle, painted Norfolk green, shall be Model PSO-24 as manufactured by Victor Stanley, Inc., Dunkirk, MD, or approved equal.

V. C. Urban Design Issues

While the proposed streetscape provides a basic framework for the project, architecture, setbacks, parking and driveways, commercial signage and private landscape features are critical components of the urban space. These issues need to be addressed in a separate study and specific guidelines developed to insure the creation of a unified urban design. While solutions to these urban design problems are beyond the scope of this study, the following general recommendations are made in an intent to relate streetscape and urban design elements.

The quality of much of the existing architecture is poor, structures are fragmented, relationships are forced or tenuous, and detailing is inconsistent or inappropriate. Design guidelines should be prepared and adopted by the Ghent Business Association which encourage a return to traditional architectural styles and motifs. This design approach would strengthen the connections between the commercial and residential areas as well as unify the retail corridor. The use of traditional materials (masonry and wood), the adherence to smaller residential scale, and the introduction of details which reflect the historic architecture of Ghent would contribute to a more unified urban design. The renovation of the commercial buildings directly north of the theater on Colley Avenue or the design of Kelley's Restaurant across the street serve as examples of appropriate design. The horizontal cornice and dental molding create a strong datum that organizes the project while simple columns divide the structure into smaller modules. The overall scale of the architecture and the details in these two buildings is pedestrian and relates well to the adjacent residential community. Commercial signage is identified as an integral part of the commercial environment. The scale and style of signage should relate to the overall

architectural pattern but should neither dominate nor detract from the architecture.

The relationship between the face of the building and the sidewalk is critical. The "walls" which define the edges of the streetscape are irregular and in some instances are nonexistent. The intimacy of the streetscape is interrupted by parking lots which separate the architecture from the pedestrian pathway. The traditional relationship of building, sidewalk and street should be reestablished. Off-street parking against the sidewalk should be discouraged along the main streets. A reduction in the number and width of driveways will strengthen the pedestrian character of the paving while creating additional spaces for on street parking. The self-contained shopping center form set back from the road and new franchise stores set in the middle of dedicated parking areas has eroded the architectural edge of the streetscape and should be discouraged.

Sidewalk cafes, open shopfronts and sidewalk sales are encouraged along both Colley Avenue and 21st Street where they increase site vitality and contributes to the pedestrian experience. In areas with tree planting openings there should be a minimum of 4' from the back side of the tree opening to the face of any obstruction. In those areas where there are no trees, a minimum of 5' of paving should be maintained between the backside of the curb and the obstruction. The cafe enclosures should reflect the cuisine and decor of the individual establishments.

Plantings on properties adjacent to the street should encourage use of large canopy trees wherever possible to continue the canopy started at the street across a larger area. Shrub plantings should be limited to low species and hedges which will screen the lower portions of cars but not obstruct the views of businesses and the sense of a larger place. Ground covers are a preferable alternative to

traditional lawns. The substitution of low maintenance ground covers for lawn will increase the diversity and quality of the ground plane. Species selections should include low water use plants and recognize that with time and the success of this plan, more shade tolerant plants will be required.

The success of Colley Avenue and 21st Street depends not only on the implementation of the streetscape guidelines but also the development of urban design standards. Only by addressing all aspects of the community design can the revitalization find a community identity and create a sense of place.

V.D. Typical Block Studies

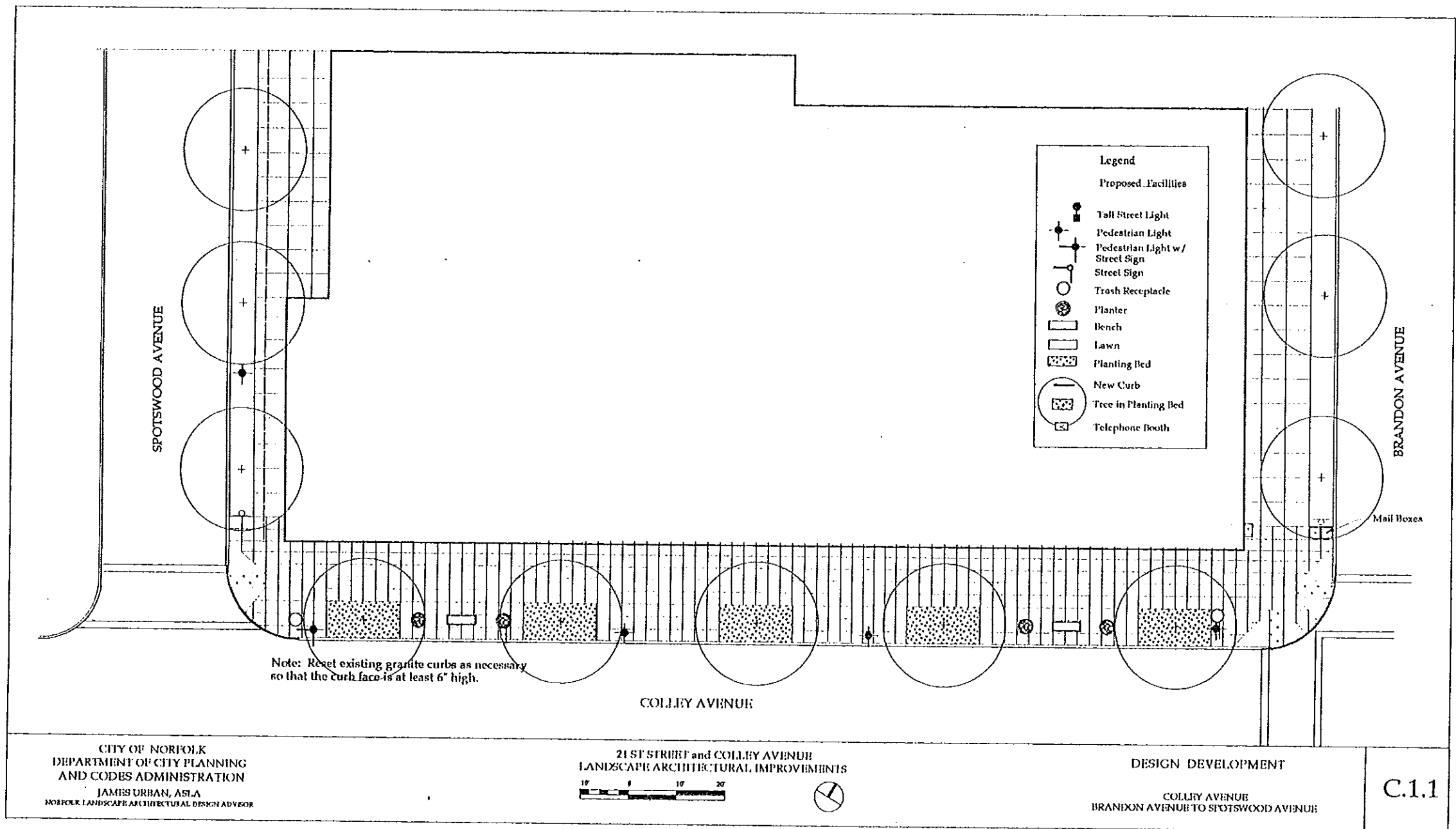
For this study, detailed plans have been developed for three blocks which are representative of the three landscape zones. Twenty First Street from Colley Avenue to Manteo Avenue and Colley Avenue between Gates and Spotswood Avenues serve as examples of the commercial Zones One and Two respectively. Colley Avenue from Maury Avenue to Princess Anne Avenue is illustrative of the residential Zone Three. In general all detail plans have concrete handicap ramps and painted crosswalks. Scored paving extends across driveways. Overhead utilities have been placed underground. The lawn panels parallel to side streets have been extended or reduced as necessary so that their edges align with the front face of the buildings. The location of site furnishings, the method of tree planting, the scoring pattern of the concrete sidewalk and revised curb and street alignments are all addressed in the individual plans.

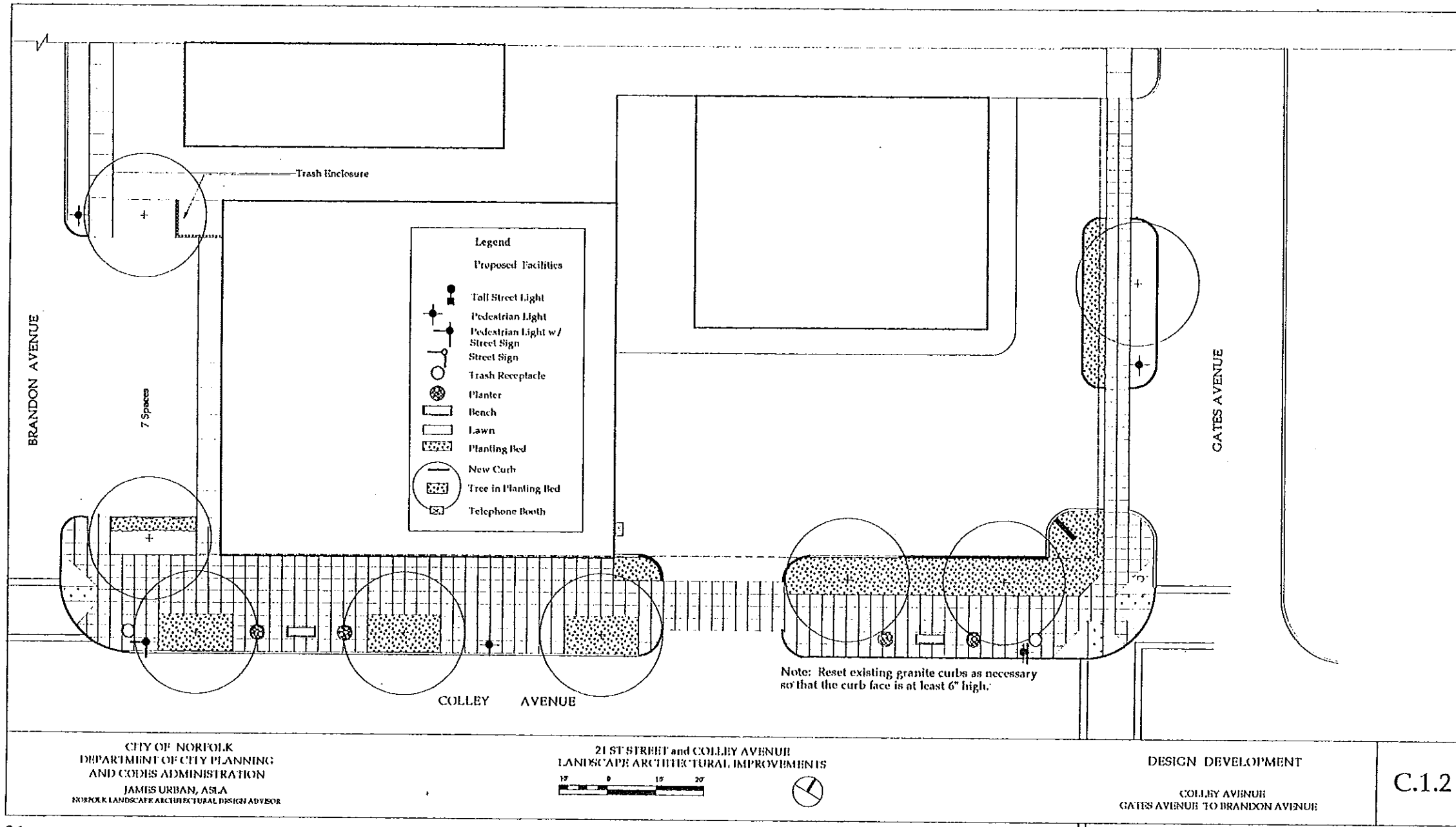
While the treatment proposals indicated on the plan for 21st Street between Colley Avenue and Manteo Street typifies that proposed for all of Zone One, several unique

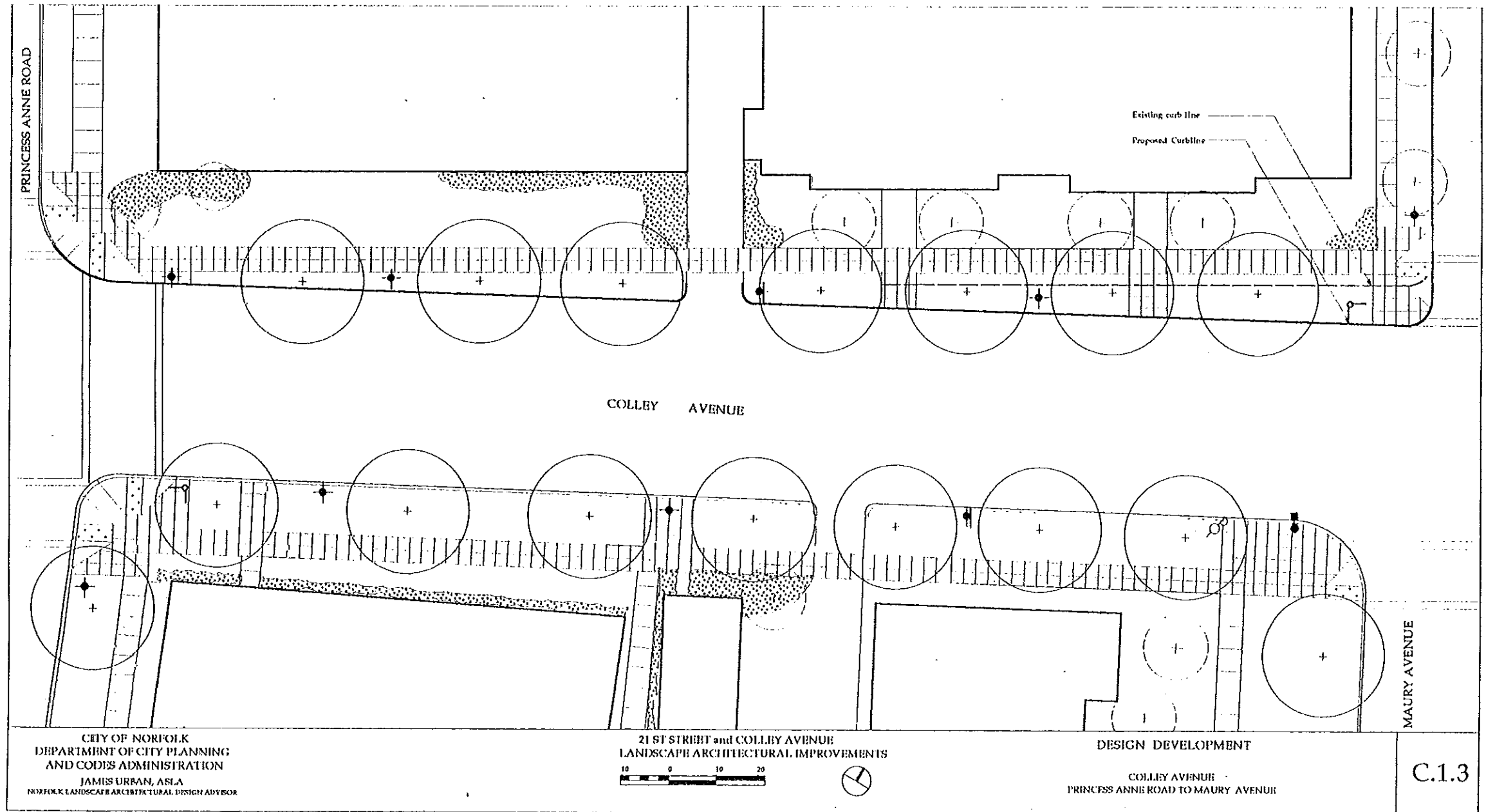
conditions occur. Trees are proposed in the standard 5'x10' beds and in the lawn panels produced by the construction of traffic islands. It is proposed that Colley Avenue and 22nd Street to the west and north of Burger King be abandoned and a new public right of way be developed (See Page 32). This would provide for a combined parking lot which would serve both the Burger King and the Baker Retail Store on 22nd Street. The abandonment of the original right-of-way permits a double row of Tulip Poplars to be planted on the eastern edge of the Colley Avenue underpass. Recognizing that the legal and financial aspects of this road abandonment and reconstruction may impact upon project phasing, the work could be phased separately. The driveways east of the drive through bank have been replaced by a single standard driveway (See Page 33). This provides more efficient off-street parking and a new bus stop location. A continuous euonymus hedge has been proposed along this driveway to separate the pedestrian and vehicular spaces.

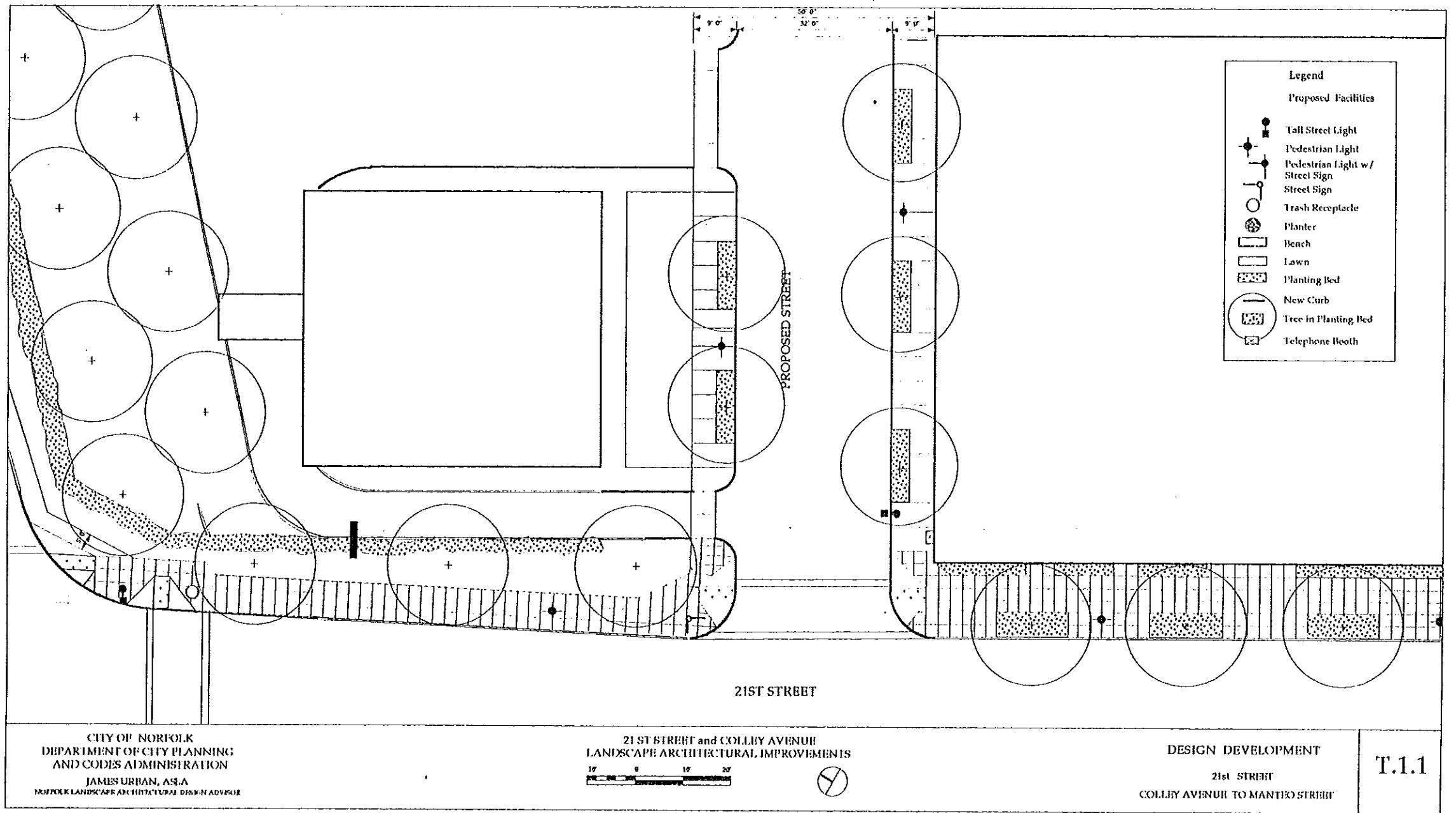
In the commercial Zone Two, the number of driveways has been reduced resulting in a stronger articulation of the pedestrian environment. At the Seven Eleven on Colley Avenue at Gates Avenue, one driveway has been eliminated and the others reduced to standard size. The off-street parking on Brandon Avenue has been flanked with tree planting beds and separated from the pedestrian space by an evergreen hedge (See Page 36)

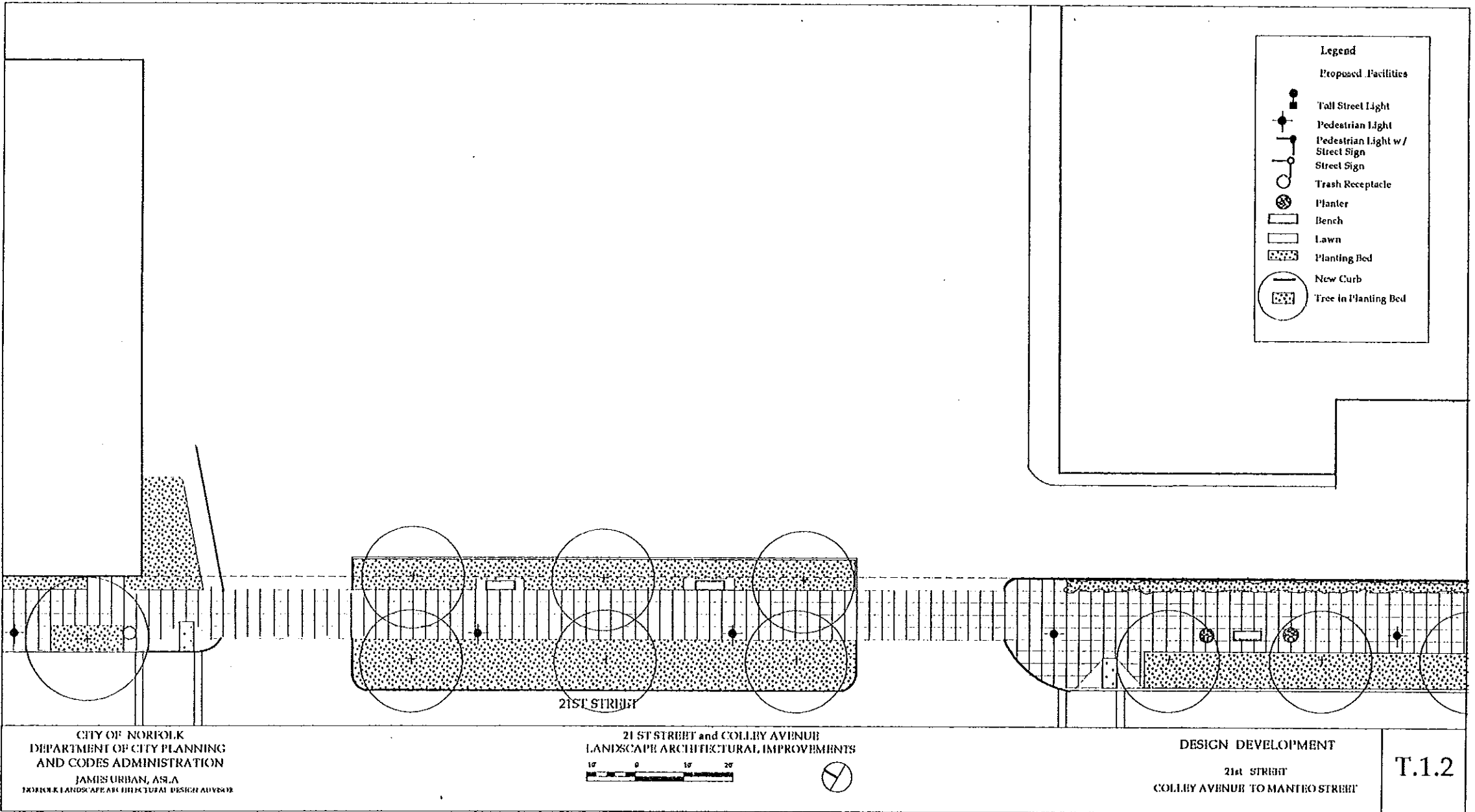
Colley Avenue, between Maury Avenue and Princess Anne Road in the residential Zone Three, has been realigned to maintain a consistent roadbed width throughout the study area. The western curb has been relocated parallel to the eastern curb resulting in a wider trapezoidal lawn panel (See page 37).

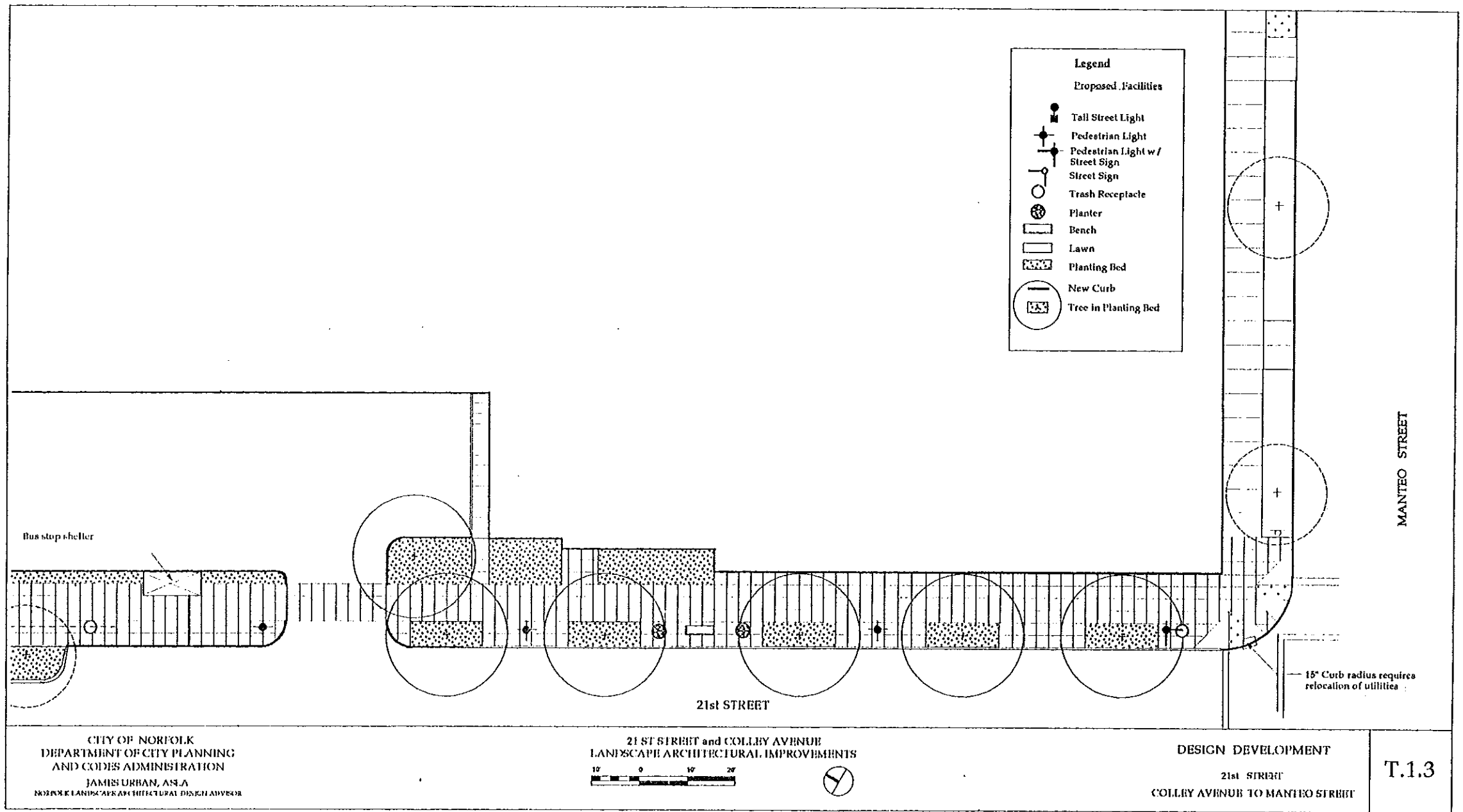












A NEW LOOK FOR 21st & COLLEY AVENUE

The goals are to create a cohesive, vital commercial and retail shopping environment along Colley Avenue and 21st Street and to convey a true sense of place and arrival to this important district of the city.

Large healthy trees provide a unifying green canopy casting cooling, dappled shade on new sidewalks. Numerous traditional street lights punctuate the sidewalk and provide a pleasant, safe level of night time lighting. Handsome benches, planters and trash receptacles furnish the street providing amenities for residents and shoppers. The old but friendly latticed street name signs return to grace intersections and awaken a bit of Norfolk's past. Through repetition of well designed and detailed elements in the public right of way, **A NEW LOOK FOR 21st STREET AND COLLEY AVENUE** will bring additional vigor to a great commercial district.

As the streetscape changes are implemented to renew economic and civic energy, they will serve as the framework and stimulus for improvements to the adjacent commercial properties.

For further information contact:

The Ghent Business Association
625 - 4239

The Department of Public Works
441 - 2827

The Department of City Planning
and Codes Administration
441 - 2375

**A NEW LOOK FOR 21st STREET
AND COLLEY AVENUE is being
undertaken by:**

The City of Norfolk, Virginia

Norfolk City Council
Norfolk City Planning Commission
Norfolk Design Review Committee
Norfolk City Administration and
Departments

City Manager
City Planning and Codes
Administration
Development
Parks and Recreation
Public Works
Utilities

Ghent Task Force

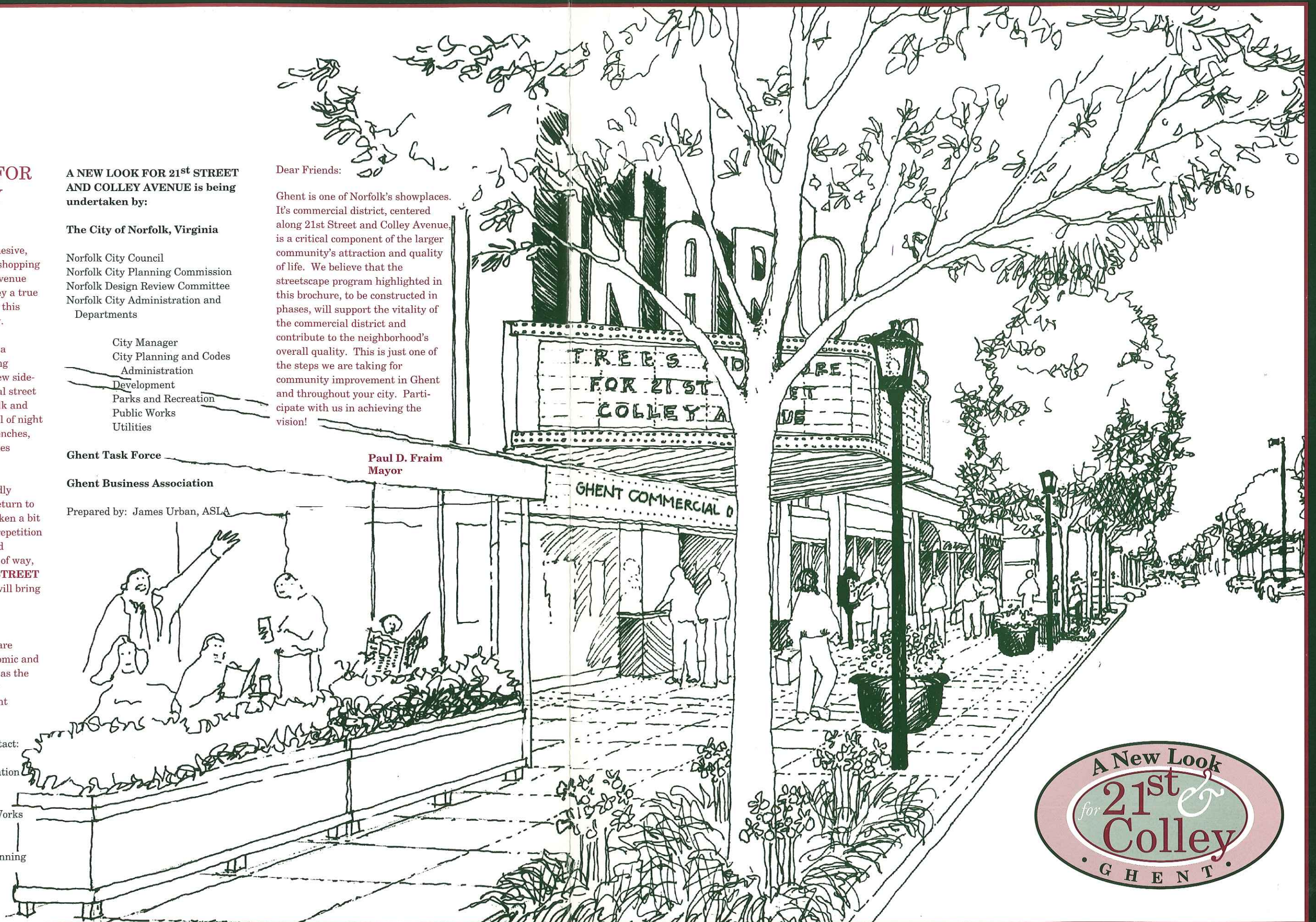
Ghent Business Association

Prepared by: James Urban, ASLA

Dear Friends:

Ghent is one of Norfolk's showplaces. It's commercial district, centered along 21st Street and Colley Avenue, is a critical component of the larger community's attraction and quality of life. We believe that the streetscape program highlighted in this brochure, to be constructed in phases, will support the vitality of the commercial district and contribute to the neighborhood's overall quality. This is just one of the steps we are taking for community improvement in Ghent and throughout your city. Participate with us in achieving the vision!

Paul D. Fraim
Mayor



The Ghent commercial district along 21st Street and Colley Avenue capitalizes on and contributes to the vitality of the adjacent neighborhoods. Moreover, the special combination of retail stores, services, restaurants and entertainment venues brought about by private investment makes the district an important Norfolk asset which contributes to the citywide quality of life enjoyed by residents, visitors and tourists.

A coalition of Norfolk's leadership, working through the Ghent Task Force, has acknowledged the importance of this district to the economic well being of the city. A comprehensive improvement of the public streetscape along 21st Street and Colley Avenue is an important and timely step to position the district for additional private investment and continued economic growth. This brochure highlights the principal elements of the new design.

Implementation

The construction of **A NEW LOOK FOR 21st STREET AND COLLEY AVENUE** is expected to be phased over several years. Phasing decisions will be based on issues such as utility undergrounding opportunities, business operation considerations, traffic requirements, availability of funding, and the degree of private participation. Phasing units should be large enough to allow significant portions of the area to be built at one time but small enough not to totally disrupt the commercial activity in the district. The City is considering formation of a special zoning district that will guide the future development along 21st Street and Colley Avenue. This district will ensure that future projects are pedestrian friendly and compatible with the proposed streetscape improvements.

Join us in creating and celebrating **A NEW LOOK FOR 21st STREET AND COLLEY AVENUE**, another example of public - private partnership at work in Norfolk.

Street and Traffic Signs

Original ornamental street name signs stand at the corners of Colley Avenue and Baldwin and Brandon Avenues. The replication and placement of these historic signposts at every intersection is recommended for use throughout the Ghent area. The custom aluminum pole and bracket would be the standard green color with a street sign panel of white lettering on a field of blue. At signalized intersections, a modified ornamental bracket of larger proportions would be installed on the signal post.

Street Lights

The Ghent standard light fixture "Traditionaire" on 10' tall poles will be placed at about 70' intervals along the sidewalks. This light is currently found throughout the residential area in Ghent and the adoption of this feature will strengthen the visual connection between the commercial and residential sections in Greater Ghent. The light fixtures and poles on 21st Street and Colley Avenue will be painted the Norfolk standard green. The fixtures and poles on the side streets will be painted black to reinforce the distinction between residential and commercial areas. To provide greater illumination at intersections, larger fixtures on 30' poles will be placed at each corner. These poles will be the city downtown standard tall pole without its decorative base and will be painted green to match the other metal elements in the commercial district.



Site Furnishings

Site furnishings serve to enrich the landscape and provide for the basic needs of the pedestrian. The repetition of standard features throughout the project unifies the landscape and identifies individual blocks as parts of the whole. The furnishings selected have a familiar traditional styling reminiscent of earlier park and garden furniture. All site furnishings will be finished in the standard green color.

Several benches constructed of cast iron and wood are to be situated on each block in the commercial areas.

Fiberglass flower planters will provide seasonal flower color throughout the commercial area. The planters will be located on an average of four per block along 21st Street and two per block along Colley Avenue. Additionally, privately maintained planters that form the edges of sidewalk cafes are encouraged and should retain the individual designs that reflect the style of the dining establishments.

Trash receptacles constructed of steel frames and domed lids are to be placed two per block on 21st Street and one per block along Colley Avenue.

Paving and Planting Areas

To achieve unity throughout the pedestrian walkway requires the removal of the existing paving and a reduction of the number of curb cuts. The new concrete paving with a light broom finish will be scored with a 30" saw cut grid. This smaller pattern will better accommodate the many sidewalk widths in the area and produce a more interesting, unifying paving pattern. The concrete will be placed on a bed of gravel to encourage root growth deeper into the enlarged soil area installed underneath the pavement. The new paving will wrap around corners and end at logical stopping points to be determined on a block to block basis. Scoring any new sidewalks on the side streets will reflect the larger spacing of the connecting residential walkways.

Planting areas with low, evergreen hedges are to be added to the back side of the sidewalk paving to separate the walkway from the parking lots and fronting on the streets. Throughout the commercial area plantings of flowers and bulbs in containers and in planting spaces adjacent to walkways will be encouraged.

Trees and Tree Life Support System

Street trees will be the primary design element along 21st Street and Colley Avenue creating a lush overhead canopy and a repetition of vertical trunk forms.

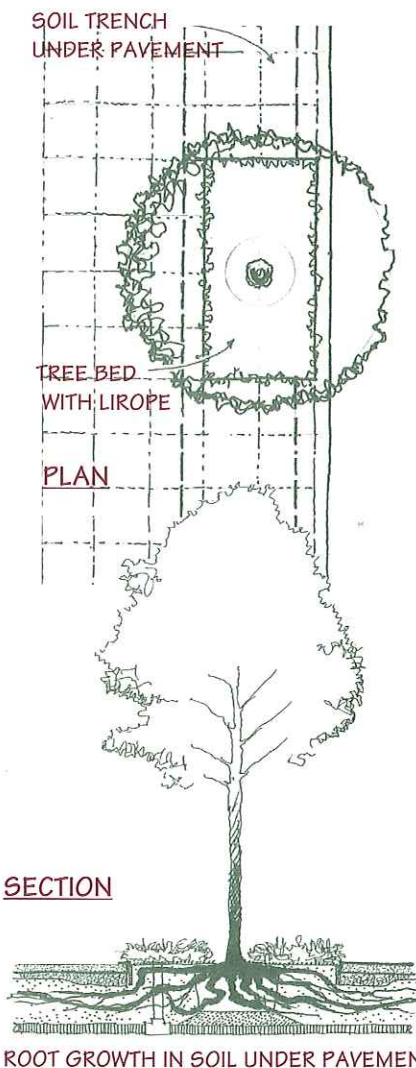
The Willow Oak is the recommended street tree for Colley Avenue because it is already the dominant tree on the street. The Willow Oak is a large shade tree which is tolerant of urban conditions and has a high dark green canopy. Planting of this tree on the east side of the street will require undergrounding of the overhead wires.

The Red Maple is recommended for 21st Street and will contrast with the color and texture of the Willow Oak.

Every tree planted will be provided with adequate growing conditions to support the size tree selected. Growing large canopy trees in commercial areas is difficult and requires extraordinary measures to be successful.

Trees within paved areas are to be planted in 5'x10' openings. Each opening will be planted with a ground cover of Liriope and clusters of Daffodils. To sustain the growth of these new trees, sub-soil will be replaced to a depth of 30" with fertile planting soil. Each tree will be connected to a drainage line. An enlarged planting soil volume will be added under the pavement to provide for long term root growth. This consists of a 5' wide x 30" deep trench between each tree. A sandy loam soil mix will be installed in the trench with drainage lines below and a layer of gravel between the soil and the paving above. This soil will be provided with irrigation lines. The pavement will be designed to structurally bridge over these root zones so that there will be less conflict between roots and pavements in the future.

Trees planted in lawn areas will be in continuous panels of deep sandy loam soil brought to the site during construction. A drainage and irrigation system will be designed to provide for the needs of each tree.



Overhead Wires

A project goal is to maximize the extent of utility undergrounding and to minimize the impact to trees and the visual environment of the wires that would remain overhead. Decisions to relocate overhead wires will be made on a case by case basis. Some of the existing overhead wiring is extremely expensive to put underground and strict adherence to a policy of total undergrounding would significantly increase the total time and cost of construction. Undergrounding of the utility wires will also necessitate some added cost to the adjacent property owners.